7-31-09 Letting, Item 059

CONTRACT NO. 89524

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
PLANS FOR PROPOSED
CH R-15 (SPOON RIVER ROAD)
SECTION 08-00092-01-BR
PROJECT ARA -143(050)
PEORIA COUNTY
C-94-102-09

INDEX OF SHEETS

Sheet	Title
1	Cover Sheet
2	Summary of Quantities
3	General Notes, Bridge Bill of Material & Typical Sections
4	General Plan & Elevation
5	Bridge General Notes & Slope Wall Repairs
6	Existing Pier and Abutment Layout
7	Span 1 - 27" x 36" PPC Deck Beam Details
8	Span 2 - 27" x 36" PPC Deck Beam Details
9	Span 3 - 27" x 36" PPC Deck Beam Details
10	27" x 36" PPC Deck Beam Details
11	Preformed Joint Strip Seal
12	Superstructure Details
13	Steel Railing, Type SM with Hot-Mix Asphalt Wearing Surface
14.	Pier Repair Details
15.	West Abutment Details
16.	East Abutment Details

Full size plans have been prepared using the standard engineering scales, reduced sized plans will not conform to standard scales, in making measurements on reduced plans, the graphic scales may be used.

OA/OC BITUMINOUS PROJECT

STATE STANDARDS

No.	Title
280001-04	Temporary Erosion Control Systems
515001-03	Name Plate for Bridges
630001-08	Steel Plate Beam Guardrail
630301-05	Shoulder Widening for Type 1 (Special) Guardrail Terminal
631032-04	Traffic Barrier Terminal, Type 6A
635006-03	Reflector and Terminal Marker Placement
635011-02	Reflector Marker & Mounting Details
701301-03	Lane Closure 2L, 2W Short Time Operations
701901-01	Traffic Control Devices
BLR 21-8	Typical Application of Traffic Control Devices for Construction on Rural Local Highways
BLR 22-6	Typical Application of Traffic Control Devices for Construction on Rural Local Highways Traffic Barrier

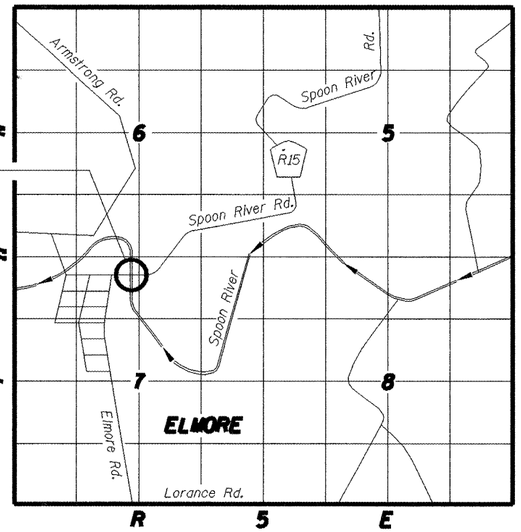
DISTRICT STANDARDS

No.	Title
280001-D4	Typical Application of Silt Filter Fence

J.U.L.I.E. : 811 OR 1-800-892-0123

CONTRACT NO. 89524
CATALOG NO. 034259-00 D

Description of Work
Proposed repairs to SN 072-3101 Section 08-00092-01-BR, Begins Sta. 0+00 and Ends Sta. 4+50.



Not to Scale

LOCATION MAP

Gross Length of Project = 450 ft. = 0.085 miles
Net Length of Project = 450 ft. = 0.085 miles

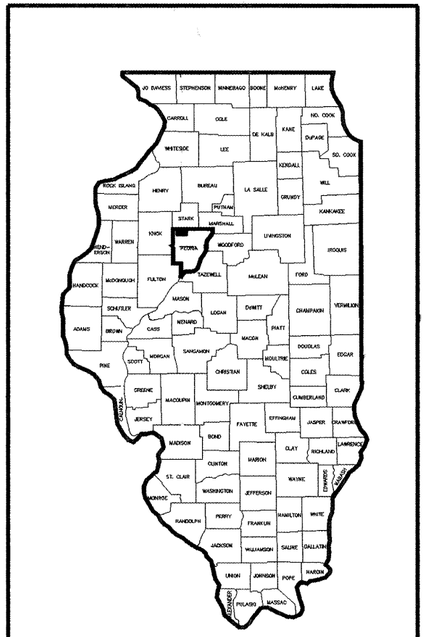
DESIGN CLASS: (SPOON RIVER RD.)

Bridge: County Highway w/ ADT = 75
Roadway: County Highway w/ ADT = 75
Design Speed: 55 mph
Functional Classification: Minor Collector
Design Guidelines: Rural

PHILIP J. LANE 062-034581 LICENSED PROFESSIONAL ENGINEER OF ILLINOIS

Philip J. Lane, Illinois Professional Engineer
No. 34581, Expires 11/30/09

4/10/09
Date



LOCATION OF SECTION INDICATED THUS: ▪▪▪▪

Approved April 13 20 09
James J McFarley
County Engineer

Passed April 14 20 09
Derek C Paine
District 4 Engineer of Local Roads & Streets

Releasing for Bid Based on Limited Review 4/14 20 09
Joseph E. Crowe, Jr.
Deputy Director of Highways, Region Three Engineer

State of Illinois
Department of Transportation

AECOM
111 NE Jefferson Ave.
Peoria, Illinois 61602
Ph: 309.676.8464
Fax: 309.676.5445
IL Design Firm Reg. No. 184-001518
www.aecom.com

HWY	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CH R15	08-00092-01-BR	PEORIA	16	1
STRUCTURE NO. 072-3101				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT BROS-143(050)		

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SUMMARY OF QUANTITIES

Pay Code	Item	Unit	Total	Roadway	Bridge
20700300	POROUS GRANULAR EMBANKMENT, SPECIAL	Ton	14	0	14
28000250	TEMPORARY EROSION CONTROL SEEDING	Pound	200	200	0
25000300	SEEDING, CLASS 3	Acre	0.48	0.48	0
25000400	NITROGEN FERTILIZER NUTRIENT	Pound	43	43	0
25000500	PHOSPHORUS FERTILIZER NUTRIENT	Pound	43	43	0
25000600	POTASSIUM FERTILIZER NUTRIENT	Pound	43	43	0
25100630	EROSION CONTROL BLANKET	Sq Yd	2299	2299	0
28000400	PERIMETER EROSION BARRIER	Foot	400	400	0
28100705	STONE DUMPED RIPRAP, CLASS A3	Sq Yd	67	67	0
35101100	AGGREGATE BASE COURSE, TYPE A 12"	Sq Yd	62	62	0
40600100	BITUMINOUS MATERIALS (PRIME COAT)	Gallon	82	28	54
40603100	HOT-MIX ASPHALT BINDER COURSE, IL-19.0L, N30	Ton	7.1	7.1	0
40603305	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N30	Ton	79.6	6.3	73.3
48101500	AGGREGATE SHOULDERS, TYPE B 6"	Sq Yd	36	36	0
50101500	REMOVAL OF EXISTING SUPERSTRUCTURES	Each	1	0	1
50102400	CONCRETE REMOVAL	Cu Yd	2.8	0	2.8
50104650	SLOPE WALL REMOVAL	Sq Yd	28	0	28
50200100	STRUCTURE EXCAVATION	Cu Yd	24	0	24
50300225	CONCRETE STRUCTURES	Cu Yd	9.7	0	9.7
50300255	CONCRETE SUPERSTRUCTURE	Cu Yd	3.9	0	3.9
50400505	PRECAST PRESTRESSED CONCRETE DECK BEAMS (27" DEPTH)	Sq Ft	4966	0	4966
50800205	REINFORCEMENT BARS, EPOXY COATED	Pound	1190	0	1190
*50901050	STEEL RAILING TYPE SM	Foot	306	0	306
51100300	SLOPE WALL 6 INCH	Sq Yd	28	0	28
51500100	NAME PLATES	Each	1	0	1

SUMMARY OF QUANTITIES

Pay Code	Item	Unit	Total	Roadway	Bridge
52000110	PREFORMED JOINT STRIP SEAL	Foot	99	0	99
58100200	WATERPROOFING MEMBRANE SYSTEM	Sq Yd	539.6	0	539.6
58300100	PORTLAND CEMENT MORTAR FAIRING COURSE	Foot	1482	0	1482
58700300	CONCRETE SEALER	Sq Ft	356	0	356
59300100	CONTROLLED LOW-STRENGTH MATERIAL	Cu Yd	20	0	20
*63000003	STEEL PLATE BEAM GUARD RAIL, TYPE A, 9 FOOT POSTS	Foot	50	50	0
*63100087	TRAFFIC BARRIER TERMINAL, TYPE 6A	Each	4	4	0
*63100167	TRAFFIC BARRIER TERMINAL TYPE 1, SPECIAL (TANGENT)	Each	4	4	0
67000500	ENGINEER'S FIELD OFFICE, TYPE B	Cal Mo	4	4	0
67100100	MOBILIZATION	L Sum	1	0	1
70101700	TRAFFIC CONTROL AND PROTECTION	L Sum	1	1	0
*78200100	MONODIRECTIONAL PRISMATIC BARRIER REFLECTOR	Each	24	10	14
*78201000	TERMINAL MARKER - DIRECT APPLIED	Each	4	4	0
X0325303	STRUCTURAL REPAIR OF CONCRETE (DEPTH GREATER THAN 5 INCHES)	Sq Ft	123	0	123
X0325305	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	Sq Ft	119	0	119
X5020501	UNDERWATER STRUCTURE EXCAVATION PROTECTION - LOCATION 1	Each	1	0	1
X5020502	UNDERWATER STRUCTURE EXCAVATION PROTECTION - LOCATION 2	Each	1	0	1
Z0013798	CONSTRUCTION LAYOUT	L Sum	1	0	1
Z0001900	ASBESTOS BEARING PAD REMOVAL	Each	66	0	66
X0325928	FIBER REINFORCED PROTECTION	Sq Ft	569	0	569
X0325748	ACRYLIC COATING	Sq Yd	63	0	63
XX006172	ROUTING AND SEALING CRACKS	Foot	1450	0	1450

* SPECIALTY ITEMS

DESIGNED	PJL
CHECKED	LLV
DRAWN	MGM
CHECKED	PJL

SUMMARY OF QUANTITIES
SPOON RIVER ROAD
STATION 2+25.00

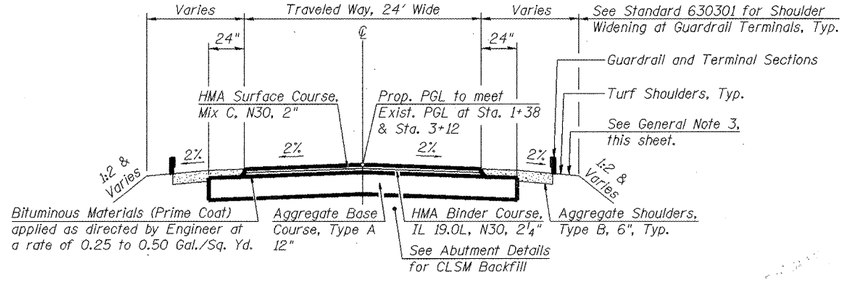
AECOM
111 NE Jefferson Ave.
Peoria, Illinois 61602
Ph: 309.676.8464
Fax: 309.676.5445
IL Design Firm Reg.
No. 184-001518
www.aecom.com

HWY	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CH R15	08-00092-01-BR	PEORIA	16	2
STRUCTURE NO. 072-3101				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT BROS-143(050)		

CONTRACT NO. 89524

BRIDGE BILL OF MATERIAL

Item	Unit	Super	Sub	Total
Porous Granular Embankment, Special	Ton	0	14	14
Bituminous Materials (Prime Coat)	Gallon	54	0	54
Hot-Mix Asphalt Surface Course, Mix "C", N30	Ton	73.3	0	73.3
Removal of Existing Superstructures	Each	1	0	1
Concrete Removal	Cu Yd	0	2.8	2.8
Slope Wall Removal	Sq Yd	0	28	28
Structure Excavation	Cu Yd	0	24	24
Concrete Structures	Cu Yd	0	9.7	9.7
Concrete Superstructure	Cu Yd	3.9	0	3.9
Precast Prestressed Concrete Deck Beams (27" Depth)	Sq Ft	4,966	0	4,966
Reinforcement Bars, Epoxy Coated	Pound	410	780	1,190
Steel Railing Type SM	Foot	306	0	306
Slope Wall 6 Inch	Sq Yd	0	28	28
Name Plates	Each	1	0	1
Preformed Joint Strip Seal	Foot	99	0	99
Waterproofing Membrane System	Sq Yd	539.6	0	539.6
Portland Cement Mortar Fairing Course	Foot	1,482	0	1,482
Concrete Sealer	Sq Ft	0	356	356
Controlled Low-Strength Material	Cu Yd	0	20	20
Mobilization	L Sum	0	1	1
Monodirectional Prismatic Barrier Reflector	Each	14	0	14
Structural Repair of Concrete (Depth Greater Than 5 Inches)	Sq Ft	0	123	123
Structural Repair of Concrete (Depth Equal To or Less Than 5 Inches)	Sq Ft	0	119	119
Underwater Structure Excavation Protection - Location 1	Each	0	1	1
Underwater Structure Excavation Protection - Location 2	Each	0	1	1
Construction Layout	L Sum	1	0	1
Asbestos Bearing Pad Removal	Each	66	0	66
Fiber Reinforced Protection	Sq Ft	0	569	569
Acrylic Coating	Sq Yd	0	63	63
Joint or Crack Routing	Foot	0	1,450	1,450
Joint or Crack Filling	Foot	0	1,450	1,450



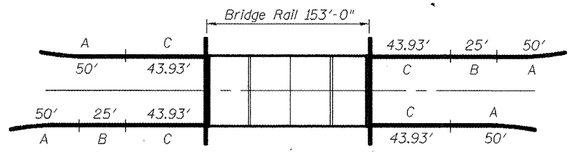
PROPOSED TYPICAL SECTION

For Roadway Repairs behind Abutments
From Sta. 1+38 to Bk. of Prop. W. Abut. and from Bk. of Prop. E. Abut. to Sta. 3+12.
See notes on Sht. 15 and Sht. 16 of 16 for roadway repair payment limits.

GUARDRAIL & RELATED ITEMS

Location		Offset	Traffic Barrier Terminal, Type 1, Special (Tangent) (Ea.) Std. 630301	Monodirectional Prismatic Barrier Reflector (Ea.)	Steel Plate Beam Guardrail, Type A (Foot) Std. 630001	Traffic Barrier Terminal, Type 6A (Ea.) Std. 631032	Terminal Marker Direct Applied (Ea.) Std. 635006
			A		B	C	
A	West of Bridge	Right	1				1
B	West of Bridge	Right		3	25		
C	West of Bridge	Right				1	
A	West of Bridge	Left	1				1
C	West of Bridge	Left		2		1	
C	East of Bridge	Right		2		1	
A	East of Bridge	Right	1				1
C	East of Bridge	Left		3		1	
B	East of Bridge	Left			25		
A	East of Bridge	Left	1				1
	Total		4	10	50	4	4

1.) See Sht. 13 of 16 for Bridge Rail
2.) Monodirectional Reflectors spaced at 25 ft. O.C. except none on the Traffic Barrier Terminal, Type 1 Special (Tangent); See also Sht. 12 of 16.



GUARDRAIL LAYOUT

GENERAL NOTES

1.) All work shall be in conformance with applicable sections of the Illinois Department of Transportation's "Standard Specifications for Road and Bridge Construction" adopted January 1, 2007 and Supplemental Specifications adopted January 1, 2009.

2.) The Contractor shall be responsible for locating and protecting utility property during construction operations as outlined in Article 107.31 of the Standard Specifications. The JULIE number is 811 or 800-892-0123.

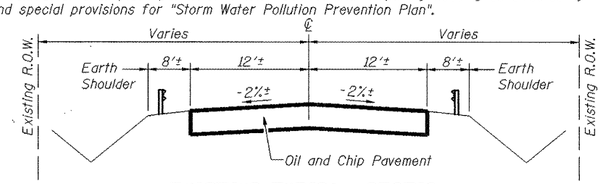
3.) The final top four inches of soil in any right of way area disturbed by the contractor must be a cohesive topsoil capable of supporting vegetation. Cost of topsoil restoration is included in Seeding, Class 3.

4.) A nationwide 404 permit has been obtained for this project and the conditions of that permit must be adhered to.

EROSION CONTROL, SEEDING & RELATED ITEMS SUMMARY

Location (Offset)	Seeding Class 3 (Acres)	Erosion Control Blanket (Sq. Yd.)	Nitrogen Fertilizer Nutrient (Pound) ***	Phosphorus Fertilizer Nutrient (Pound) ***	Potassium Fertilizer Nutrient (Pound) ***	Perimeter Erosion Control Barrier (Foot) ****	Temporary Erosion Control Seeding (Pound) ****
NW: Sta. 0+47.96 to Sta. 1+47.96 (Left)	0.11	509	10	10	10	100	
SW: Sta. 0+47.96 to Sta. 1+47.96 (Right)	0.07	335	6	6	6	100	
NE: Sta. 3+00.94 to Sta. 4+00.94 (Left)	0.16	756	14	14	14	100	
NE: Sta. 3+00.94 to Sta. 4+00.94 (Right)	0.14	699	13	13	13	100	
Total	0.48	2299	43	43	43	400	200

1. Nutrient Application Rate: 1-1-1 at 270 lbs./acre ***
2. Erosion Control Blanket shall be knitted straw only
3. The Contractor shall restore all vegetated areas disturbed by his activities. As an allowance for payment, the seeding areas shown are measured from the outside edge of 24' pavement to existing right-of-way, from backs of abutments outward 100 ft. Restoration of surfaces beyond these limits will not be measured for payment, but shall be at the Contractor's expense.
4. **** The Contractor shall place perimeter erosion control and temporary seeding as directed by the Engineer. See Standard 280001 and 280001-D4 and special provisions for "Storm Water Pollution Prevention Plan".



EXISTING TYPICAL SECTION

Not to Scale

HMA MIX DESIGN

	HMA Surface	HMA Binder
AC/PG:	PG64-22	PG64-22
RAP % (Max):	30%	30%
Design Air Voids:	4.0% @ N=30	4.0% @ N=30
Mixture Composition:	IL 9.5 or 12.5	IL 19.0 L
Friction Aggregate	Mixture C	N/A

**If the RAP option is selected, the asphalt cement grade may need to be adjusted; this will be determined by the Engineer.

UTILITY COMPANIES

Electric
Amerencilco
Kent Kowalske, PE
300 Liberty
Peoria, IL 61602
Ph.: 309-693-4839

Telephone
Mid Century Telephone Co-op
Steve Russell
285 Mid Century Lane
P.O. Box 380
Fairview, IL 61432
Ph.: 309-778-8611

DESIGNED	PJL
CHECKED	LLV
DRAWN	MGM
CHECKED	PJL

GENERAL NOTES, BRIDGE BILL OF MATERIAL & TYPICAL SECTIONS SPOON RIVER ROAD STATION 2+25.00

AECOM
111 NE Jefferson Ave.
Peoria, Illinois 61602
Ph. 309.676.8464
Fax. 309.676.5445
IL Design Firm Reg.
No. 184-001518
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HWY	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CH R15	08-00092-01-BR	PEORIA	16	3
STRUCTURE NO. 072-3101				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT BROS-143(050)		

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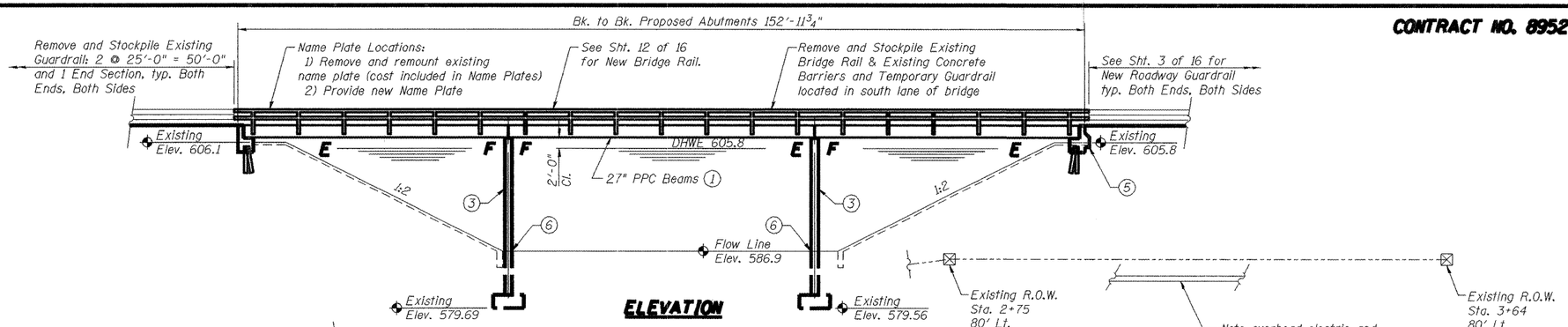
CONTRACT NO. 89524

Benchmark: USGS Bronze Tablet "3RLJ 1977" atop southwest wing wall of existing bridge, El. 610.008 (1929 Datum)

Existing Structure SN072-3101 was built in 1977 as Section 73-00114-00-BR and is a 3 Span, P.P.C. Deck beam bridge, 152'-0" back to back of existing abutments by 33'-0" out to out width, supported on pile bent abutments and hammerhead piers founded on shale bedrock.

Proposed work includes superstructure removal and replacement on existing piers and abutments.

Salvage: Contractor shall remove existing steel bridge rail, roadway guardrail, concrete barrier sections, and terminal sections and safely stockpile on-site as directed by the Engineer, for relocation by County. Cost shall be included in Removal of Existing Superstructures.



ELEVATION

CONCRETE REPAIRS

(1) Remove existing 27" PPC deck beams, furnish and install new deck beams.

(2) Repairs to 6" concrete slope wall: See also Sht. 5 of 16.
- A. saw cut, remove and replace 8' x 30'±
- B. saw cut, remove and replace 2' x 2'±
- C. saw cut, remove and replace 1' x 1'± and 1' x 6'±
- D. rout, clean, and seal concrete joints and cracks.

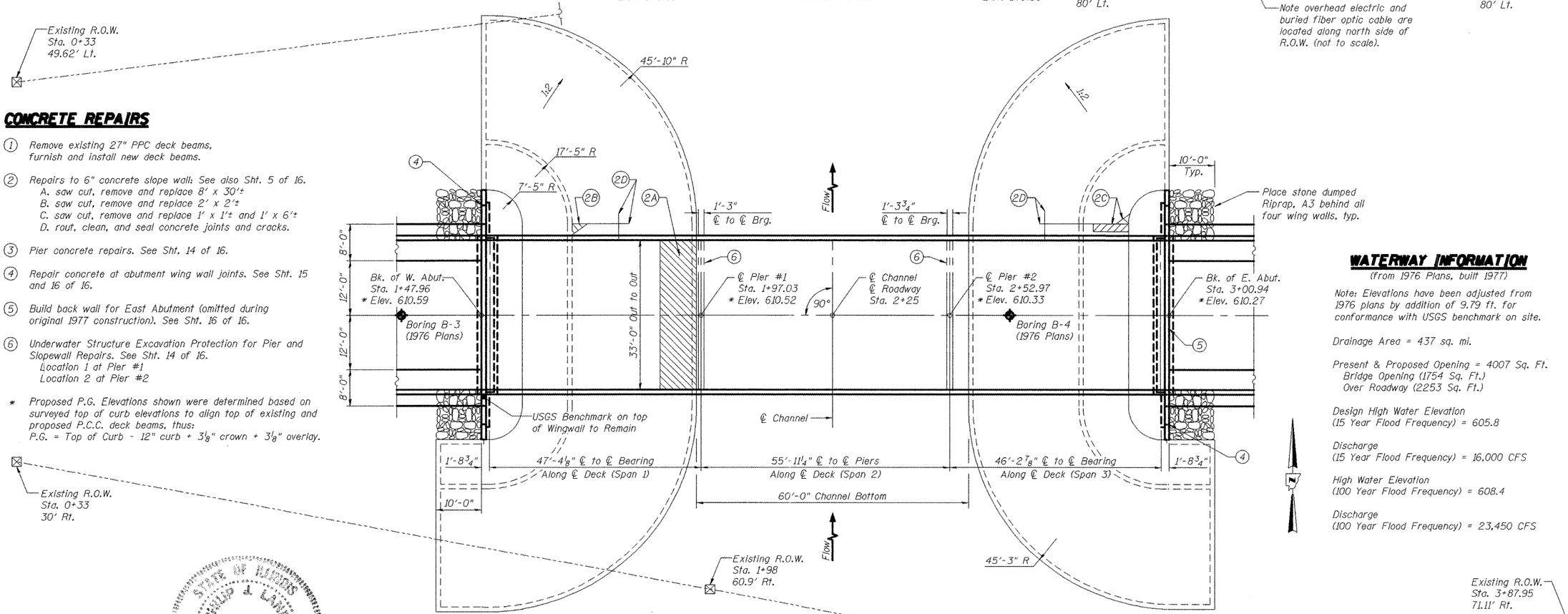
(3) Pier concrete repairs. See Sht. 14 of 16.

(4) Repair concrete at abutment wing wall joints. See Sht. 15 and 16 of 16.

(5) Build back wall for East Abutment (omitted during original 1977 construction). See Sht. 16 of 16.

(6) Underwater Structure Excavation Protection for Pier and Slopewall Repairs. See Sht. 14 of 16.
- Location 1 at Pier #1
- Location 2 at Pier #2

* Proposed P.G. Elevations shown were determined based on surveyed top of curb elevations to align top of existing and proposed P.C.C. deck beams, thus:
P.G. = Top of Curb - 12" curb + 3 1/8" crown + 3 1/8" overlay.



PLAN

WATERWAY INFORMATION

(from 1976 Plans, built 1977)

Note: Elevations have been adjusted from 1976 plans by addition of 9.79 ft. for conformance with USGS benchmark on site.

Drainage Area = 437 sq. mi.

Present & Proposed Opening = 4007 Sq. Ft.
Bridge Opening (1754 Sq. Ft.)
Over Roadway (2253 Sq. Ft.)

Design High Water Elevation
(15 Year Flood Frequency) = 605.8

Discharge
(15 Year Flood Frequency) = 16,000 CFS

High Water Elevation
(100 Year Flood Frequency) = 608.4

Discharge
(100 Year Flood Frequency) = 23,450 CFS

GENERAL PLAN & ELEVATION
SPOON RIVER ROAD
STATION 2+25.00

DESIGNED	PJL
CHECKED	LLV
DRAWN	MGM
CHECKED	PJL

STATE OF ILLINOIS — PHILIP J. LANE — 4084 — LICENSED STRUCTURAL ENGINEER — PEORIA, IL

Philip J. Lane, Illinois Licensed Structural Engineer No. 4084
Lic. Expires: 11/30/10

4/10/09
Date

AECOM
111 NE Jefferson Ave.
Peoria, Illinois 61602
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HWY	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CH R15	08-00092-01-BR	PEORIA	16	4
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FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT BROS-143(050)		

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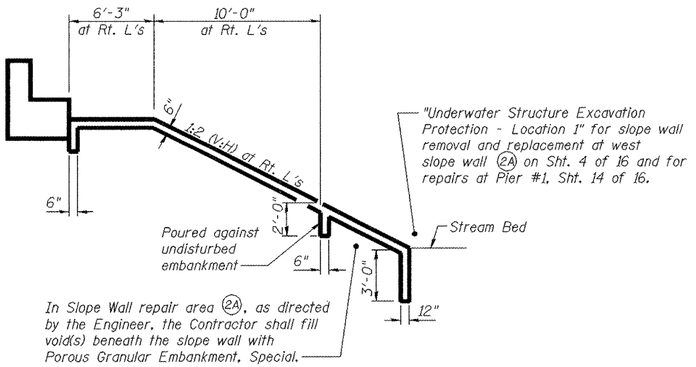
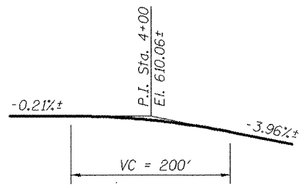
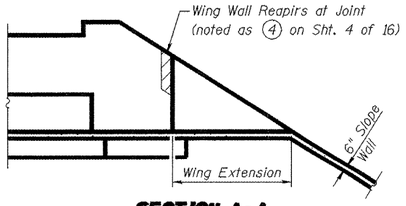


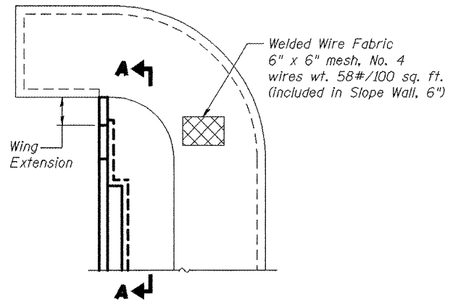
SECTION THRU EXISTING 6" CONCRETE SLOPEWALL



PROPOSED PROFILE



SECTION A-A WINGWALL DETAIL



PART PLAN OF EXISTING SLOPE WALL

GENERAL NOTES

1. Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions.

2. Reinforcement bars designated (E) shall be epoxy coated.

3. Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

4. The Contractor shall obtain a construction permit from the Illinois Department of Natural Resources (IDNR), Office of Water Resources for any temporary construction activity placed in the water except cofferdams. This shall include the placement of material for run-arounds, causeways, etc.

5. Slopewall repairs shall be reinforced with welded wire fabric, 6'' x 6'' - W4.0 x W4.0, weighing 58 lbs. per 100 sq. ft.

6. Repair of the piers and abutments shall be completed prior to placement of the new deck beams.

7. The contractor is advised that the existing PPC Deck Beams are in a deteriorated condition with reduced load carrying capacity. It is the contractor's responsibility to account for the condition of the beams and stability of hammerhead piers when developing construction procedures for removal and replacement of the superstructure. See Special Provisions for "Demolition Plans for Removal of Existing Structures".

8. If the contractor's procedure for existing beam removal or placement of new beams involves placement of cranes or other heavy equipment on new beams a detailed procedure shall be submitted to the Engineer for approval. The procedure shall include calculations, prepared and sealed by an Illinois Licensed Structural Engineer, verifying that the equipment and procedure used will not overstress the new beams. To distribute load to multiple beams and protect the concrete, in all cases a double layer mat of heavy timbers shall be used at all times under crane tracks or wheels and any outriggers in the down position. If necessary, shims shall be used under the crane mat to ensure uniform contact with the underlying beams. Prior to placement of the timber mats, the following shall be done: placement and tightening of transverse tie assemblies, grouting and curing the dowel rods 24 hours minimum, and after grouting and curing the shear keys. A temporary means of lateral restraint will be required for facia beams at expansion ends of beams to prevent movement of the beams.

9. The cut strands at each beam end shall be given two coats of zinc dust spray or paint meeting the requirement of ASTM A780. The zinc dust spray or paint shall be applied before corrosion appears and allowed to dry according to the manufacturer's specifications prior to another coat of zinc. A concrete sealer meeting the requirements of Section 587 of the Standard Specifications shall be applied to the exterior face and 9" in on the underside of the fascia beams. The sealer shall be applied after visible crack growth has subsided. This work shall be performed by the producer and included with the cost of the beam.

10. Concrete Sealer shall be applied to the designated areas of the abutments.

SPOON RIVER
REBUILT 200_ BY
PEORIA COUNTY
SECTION 08-00092-01-BR
STATION 2+25
STR. NO. 072-3101 LOADING HS20

NAME PLATE

See Std. 515001

Existing Name Plate shall be cleaned and relocated next to new Name Plate. Cost included with Name Plates.

DESIGN STRESSES

NEW PRESTRESSED BEAMS

f'c = 6,000 psi
f'ci = 5,000 psi
f's = 270,000 psi (7/16" ϕ Strands)
f'si = 189,000 psi (7/16" ϕ Strands)

EXISTING CAST IN PLACE UNITS

fc = 1,200 psi (Abut.) 1,400 psi (Pier)
Vc = 75 psi (Footings) 90 psi (Caps)
fs = 20,000 psi (Reinforcement)
n = 10

DESIGN SPECIFICATIONS

Proposed Deck Beams
2007 AASHTO LRFD Bridge Design Specifications
Existing Design Specifications AASHTO 1973

LOADING HS20-44

Allow 50#/sq. ft. for future wearing surface.

SLOPE WALL QUANTITIES

Item	Unit	Quantity
Slope Wall, 6"	Sq. Yd.	28
Slope Wall Removal	Sq. Yd.	28
Routing and Sealing Cracks	Foot	1,450
Stone Dumped Riprap, A3	Sq. Yd.	67
Porous Granular Embankment, Special	Ton	14

DESIGNED	PJL
CHECKED	LLV
DRAWN	MGM
CHECKED	PJL

BRIDGE GENERAL NOTES & SLOPE WALL REPAIRS SPOON RIVER ROAD STATION 2+25.00

AECOM
111 NE Jefferson Ave.
Peoria, Illinois 61602
Ph. 309.676.8464
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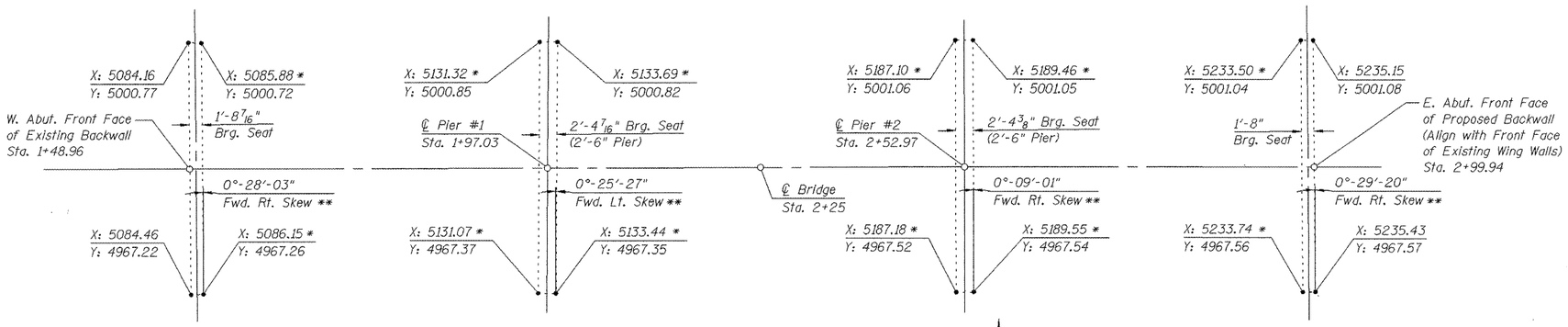
IL Design Firm Reg.
No. 184-001518
www.aecom.com

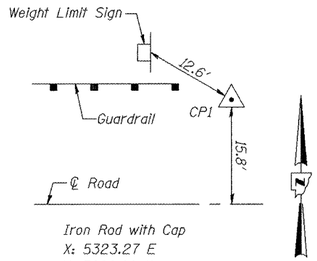
HWY	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CH R15	08-00092-01-BR	PEORIA	16	5
STRUCTURE NO. 072-3101				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT BROS-143(050)		



2008 SURVEY DATA
EXISTING PIER AND ABUTMENT LAYOUT

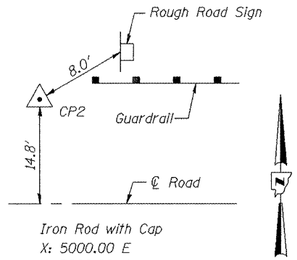
X = Easting Coordinates (E)
Y = Northing Coordinates (N)

Contractor shall field verify substructure layout prior to ordering beams. Cost included in Construction Layout. Center new deck on centers of existing piers and abutments.



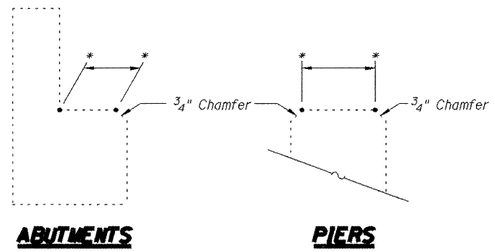
Iron Rod with Cap
X: 5323.27 E
Y: 5000.00 N
Left of Sta. 3+87.92

SURVEY TIE CONTROL POINT 1



Iron Rod with Cap
X: 5000.00 E
Y: 5000.00 N
Left of Sta. 0+64.65

SURVEY TIE CONTROL POINT 2



ABUTMENTS PIERS

END VIEW

* Coordinates to backside of 3/4" chamfer at edge of bearing seat.

**CENTERLINE SUBSTRUCTURE AND DECK

Location	Easting (X)	Northing (Y)	Station
W. Abut. Front of Backwall	5084.31	4984.00	1+48.96
℄ Pier #1	5132.38	4984.10	1+97.03
℄ Bridge = ℄ Span 2	5160.35	4984.20	2+25
℄ Pier #2	5188.32	4984.29	2+52.97
E. Abut. Front of Backwall	5235.29	4984.32	2+99.94

**Skew angles given are with respect to survey baseline. See Sht. 7, 8, and 9 of 16 for PPC Deck Beam End Skew angles. Set centerline deck on centerline of piers and abutments. Centerline of Pier #2 is offset 0.07 ft. north of a straight line connecting the centerlines of both abutments and Pier #1.

EXISTING PIER AND ABUTMENT LAYOUT SPOON RIVER ROAD STATION 2+25.00

DESIGNED	PJL
CHECKED	LLV
DRAWN	MGM
CHECKED	PJL

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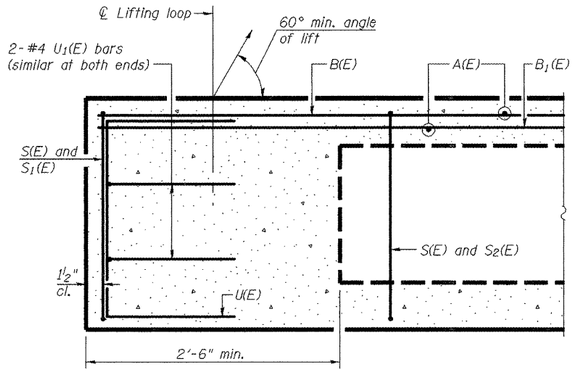
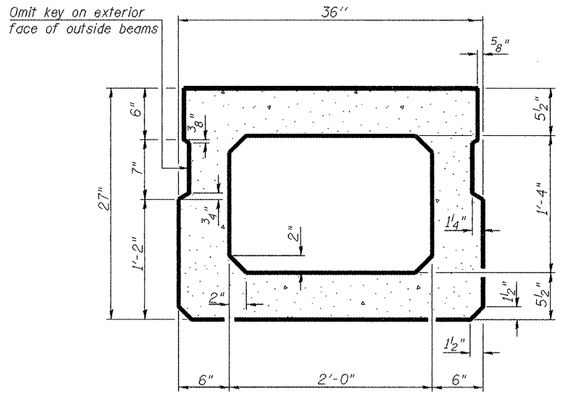
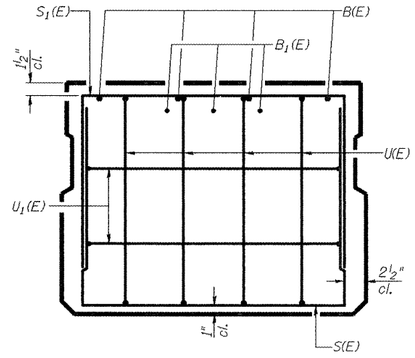
HWY	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CH R15	08-00092-01-BR	PEORIA	16	6
STRUCTURE NO. 072-3101				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT BROS-143(050)		



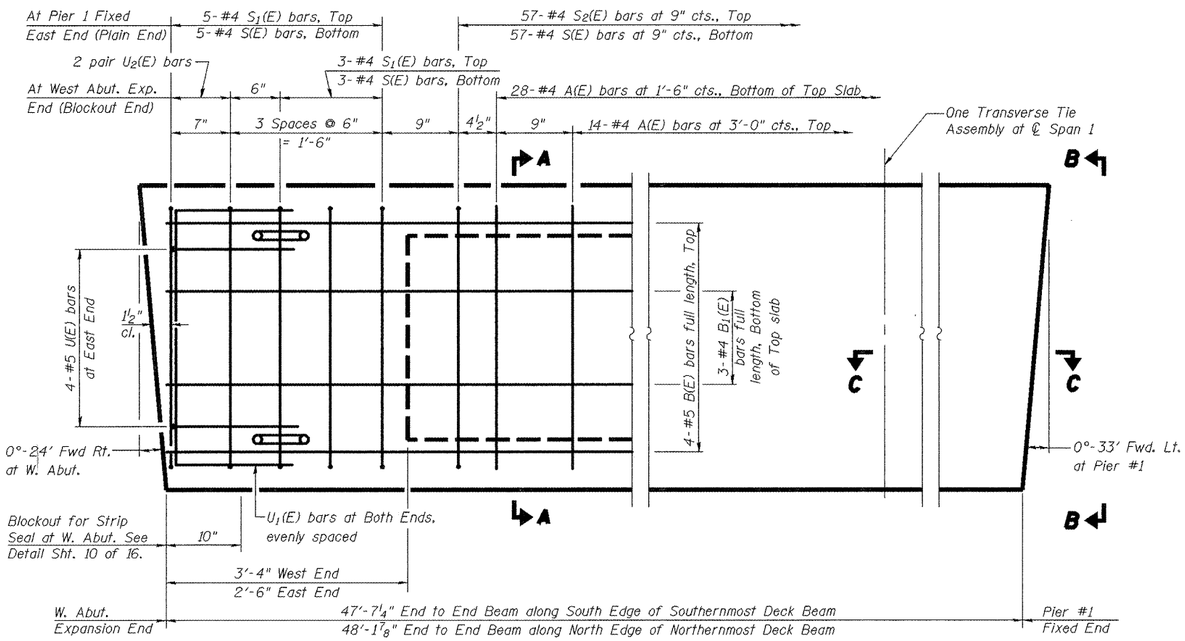
SECTION C-C
(At Pier #1 Fixed East End)



SECTION A-A
(Showing dimensions)



VIEW B-B
(At East End)



PLAN VIEW

Note: Spacing of S(E) and $S_2(E)$ bars may be adjusted up to 4" in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.

SECTION A-A
(Showing reinforcement and permissible strand locations)

Note: Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown. 12 strands (4 @ 1¾" up; 6 @ 3¾" up; 2 @ 5¾" up).

Contractor shall field verify substructure layout prior to ordering beams. Cost included in Construction Layout. Center new deck on centers of existing piers and abutments.

BAR LIST
ONE BEAM ONLY
(For information only)

	Bar	No.	Size	Length	Shape
	A(E)	42	#4	2'-7"	
*	B(E)	4	#5	47'-0"	
*	$B_1(E)$	3	#4	47'-0"	
	$B_3(E)$	3	#4	4'-6"	
	C(E)	5	#5	2'-11½"	
	E(E)	3	#5	2'-6"	
	S(E)	65	#4	6'-5"	
	$S_1(E)$	8	#4	5'-11"	
	$S_2(E)$	57	#4	6'-2"	
	U(E)	4	#5	4'-6"	
	$U_1(E)$	4	#4	5'-0"	
	$U_2(E)$	4	#4	4'-9"	

Note: See Sht. 10 of 16 for additional details and Bill of Material.

* Maximum Length shown; shorten as required to maintain 1½" end clearance.

SPAN 1
27" X 36" PPC
DECK BEAM DETAILS
SPOON RIVER ROAD
STATION 2+25.00

DESIGNED	PJL
CHECKED	LLV
DRAWN	MGM
CHECKED	PJL

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HWY	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CH R15	08-00092-01-BR	PEORIA	16	7
STRUCTURE NO. 072-3101				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT BROS-143(050)		

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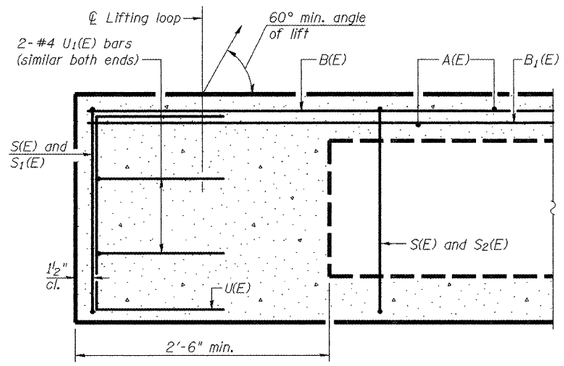
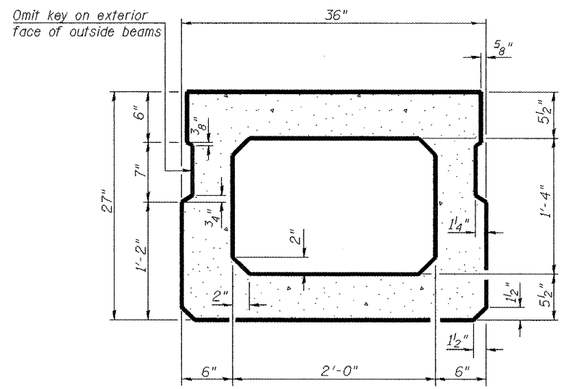
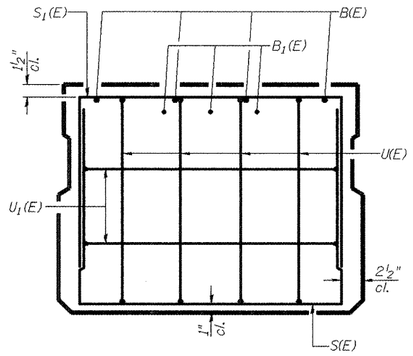


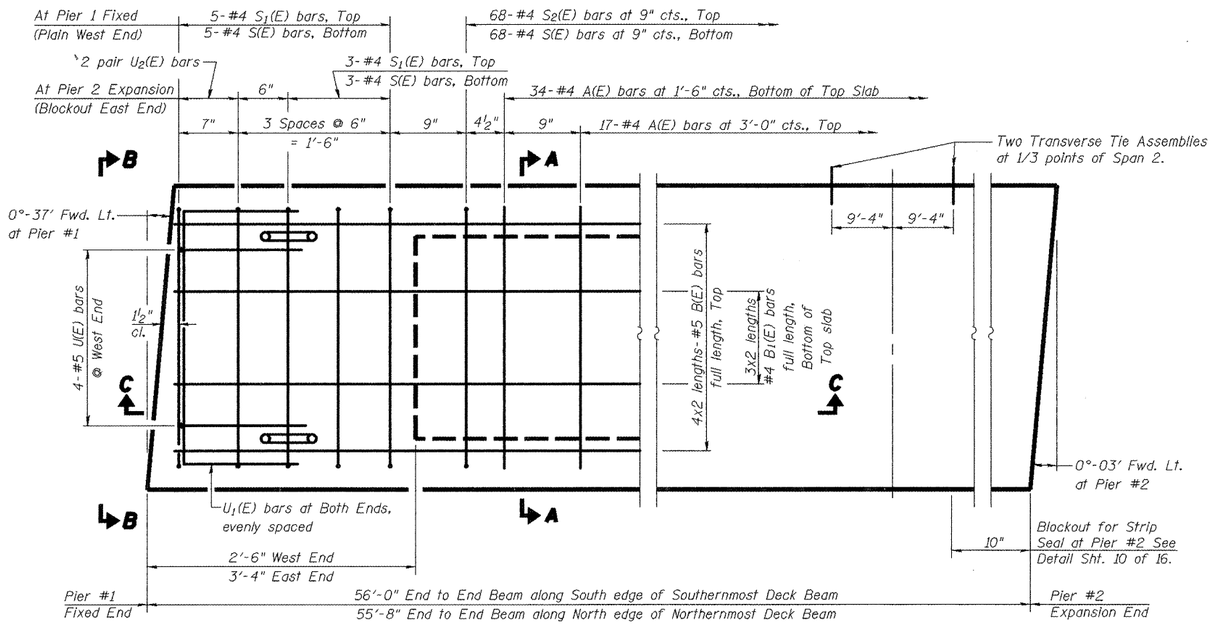
SECTION C-C
(At Pier 1 Fixed, West End)



SECTION A-A
(Showing dimensions)

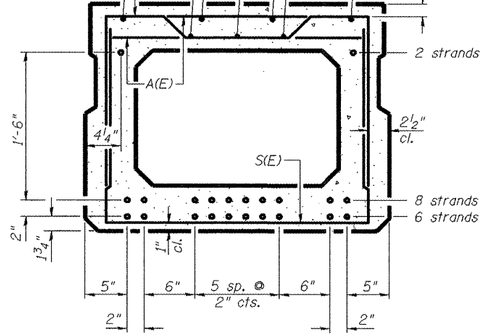


VIEW B-B
(At West End)



PLAN VIEW

Note: Spacing of S(E) and $S_2(E)$ bars may be adjusted up to 4" in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.



SECTION A-A
(Showing reinforcement and permissible strand locations)

Note: Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown. 16 strands (6 @ $1\frac{3}{4}$" up; 8 @ $3\frac{3}{4}$" up; 2 @ 1'-$9\frac{3}{4}$" up).

Contractor shall field verify substructure layout prior to ordering beams. Cost included in Construction Layout. Center new deck on centers of existing piers and abutments.

BAR LIST
ONE BEAM ONLY
(For information only)

	Bar	No.	Size	Length	Shape
	A(E)	51	#4	2'-7"	
*	B(E)	8	#5	28'-6"	
*	B_1(E)	6	#4	28'-2"	
	B_3(E)	3	#4	4'-6"	
	C(E)	5	#5	2'-11½"	
	E(E)	3	#5	2'-6"	
	S(E)	76	#4	6'-5"	
	S_1(E)	8	#4	5'-11"	
	S_2(E)	68	#4	6'-2"	
	U(E)	4	#5	4'-6"	
	U_1(E)	4	#4	5'-0"	
	U_2(E)	4	#4	4'-9"	

Note: See Sht. 10 of 16 for additional details and Bill of Material.

* Minimum Laps: 2'-2" #5 bars, 1'-8" #4 bars

SPAN 2
27" X 36" PPC
DECK BEAM DETAILS
SPOON RIVER ROAD
STATION 2+25.00

DESIGNED	PJL
CHECKED	LLV
DRAWN	MGM
CHECKED	PJL

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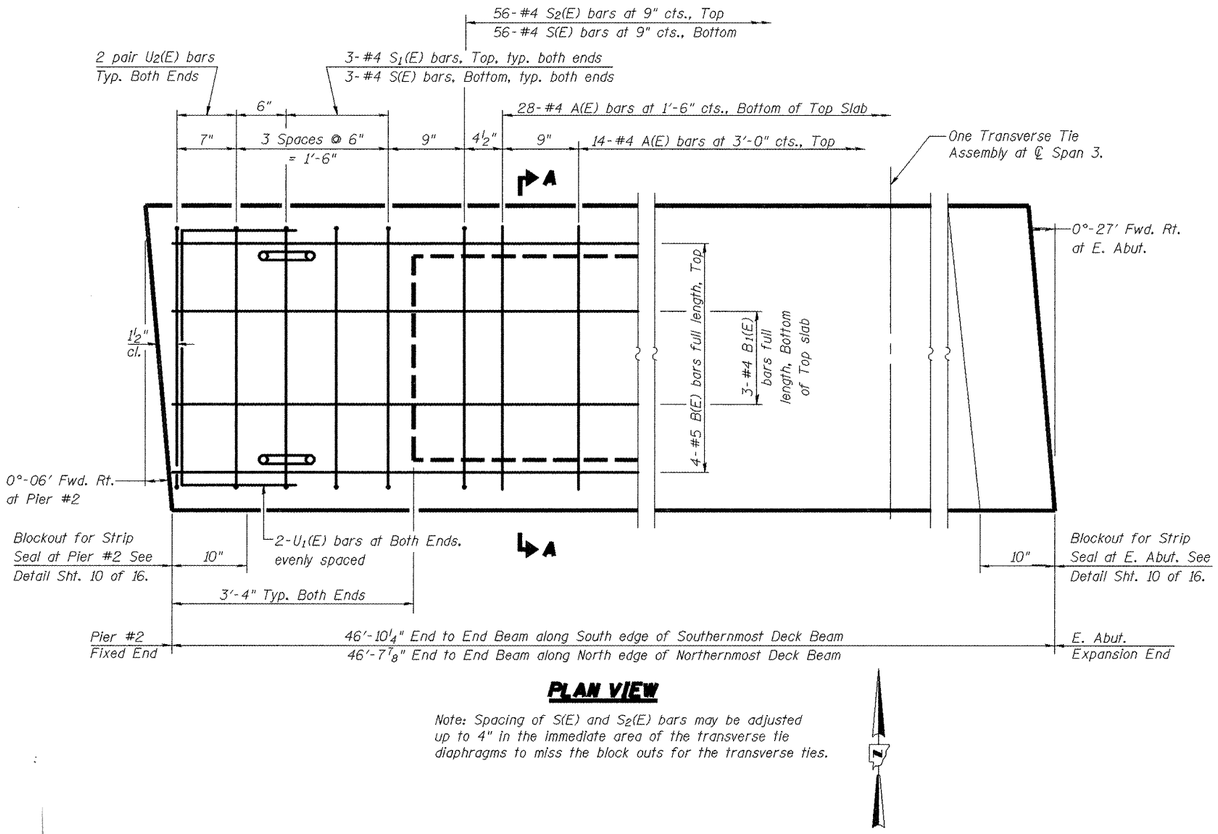
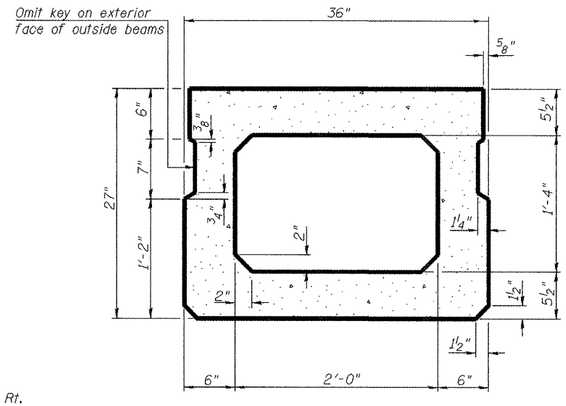
HWY	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CH R15	08-00092-01-BR	PEORIA	16	8
STRUCTURE NO. 072-3101				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT BROS-143(050)		



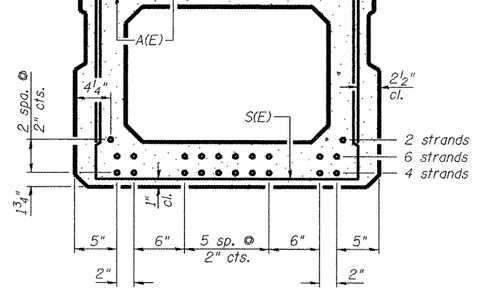
PLAN VIEW

Note: Spacing of S(E) and $S_2(E)$ bars may be adjusted up to 4" in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.



SECTION A-A

(Showing dimensions)



SECTION A-A

(Showing reinforcement and permissible strand locations)

Note: Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown. 12 strands (4 @ $1\frac{3}{4}$" up; 6 @ $3\frac{3}{4}$" up; 2 @ $5\frac{3}{4}$" up).

Contractor shall field verify substructure layout prior to ordering beams. Cost included in Construction Layout. Center new deck on centers of existing piers and abutments.

BAR LIST
ONE BEAM ONLY

(For information only)

	Bar	No.	Size	Length	Shape
	A(E)	42	#4	2'-7"	—
*	B(E)	4	#5	44'-11"	—
*	$B_1(E)$	3	#4	44'-11"	—
	$B_3(E)$	6	#4	4'-6"	—
	C(E)	10	#5	2'-11½"	⌐—
	E(E)	6	#5	2'-6"	—
	S(E)	62	#4	6'-5"	—
	$S_1(E)$	6	#4	5'-11"	—
	$S_2(E)$	56	#4	6'-2"	—
	$U_1(E)$	4	#4	5'-0"	⌐—
	$U_2(E)$	8	#4	4'-9"	⌐—

Note: See Sht. 10 of 16 for additional details and Bill of Material.

* Maximum Length shown: shorten as required to maintain 1½" end clearance.

SPAN 3
27" X 36" PPC
DECK BEAM DETAILS
SPOON RIVER ROAD
STATION 2+25.00

DESIGNED	PJL
CHECKED	LLV
DRAWN	MGM
CHECKED	PJL

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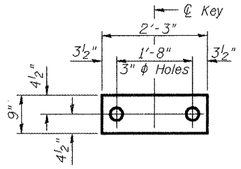
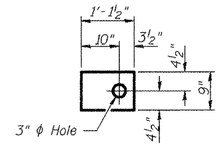
HWY	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CH R15	08-00092-01-BR	PEORIA	16	9
STRUCTURE NO. 072-3101				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT BROS-143(050)		

CONTRACT NO. 89524



INTERIOR

(30 Fixed and 30 Expansion required)

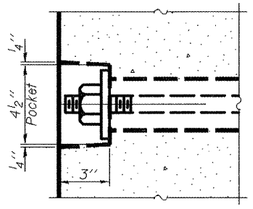


EXTERIOR

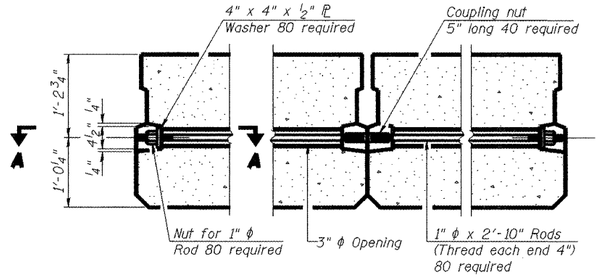
(6 Fixed and 6 Expansion required)

FIXED FABRIC BEARING PADS

Note: Omit holes when using expansion bearings.

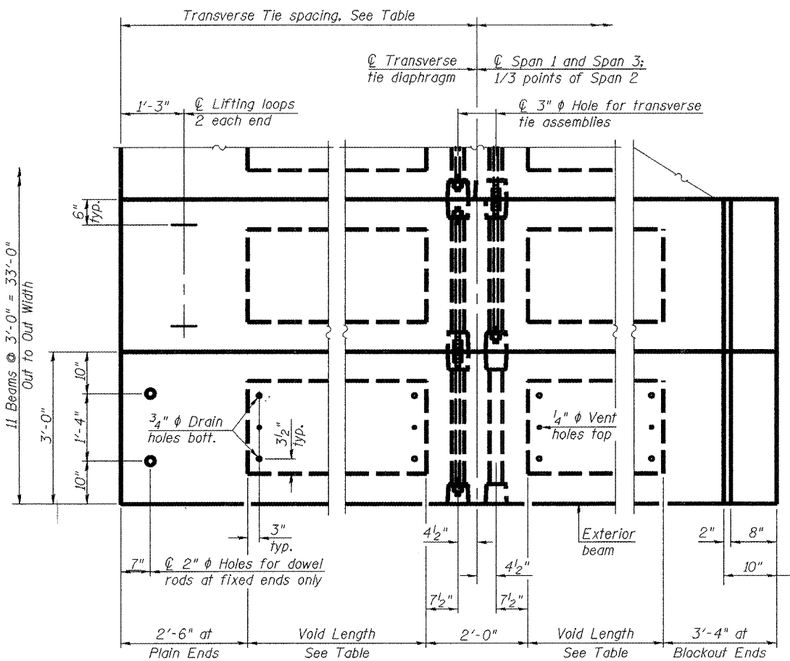


SECTION A-A



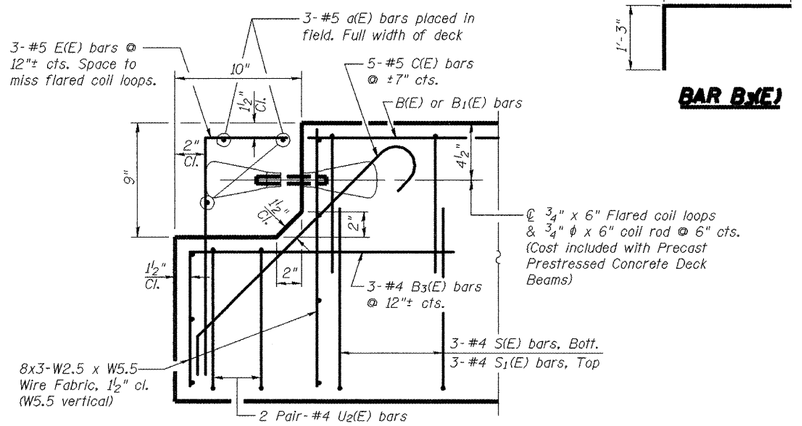
TYPICAL TRANSVERSE TIE ASSEMBLY

Spans 1 and 3: 1 Tie Assembly at Centerline Spans
Span 2: 2 Tie Assemblies at 1/3 points of Span



PLAN VIEW

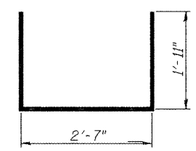
Note: Connect beams in pairs with the transverse tie configuration shown.



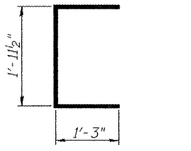
END OF BEAM DETAIL AT PREFORMED JOINT STRIP SEAL

(Typ. at both Abutments and Pier 2)

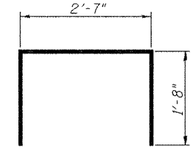
BAR B3(E)



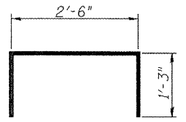
BAR S(E)



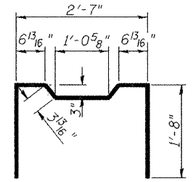
BAR U(E)



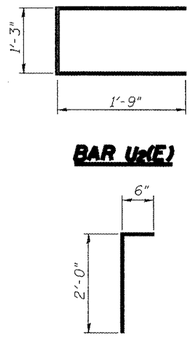
BAR S1(E)



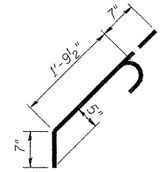
BAR U1(E)



BAR S2(E)

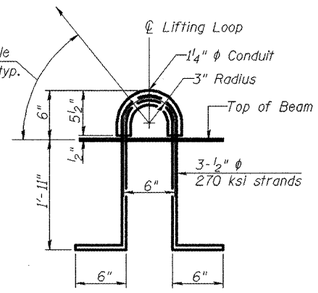


BAR U2(E)



BAR C(E)

BAR E(E)



LIFTING LOOP DETAIL

TRANSVERSE TIE SPACING AND VOID LENGTHS TABLE

Span	Number of Tie Spaces and Number of Voids	Tie Spacing Along South Edge of Deck	Tie Spacing Along North Edge of Deck	Void Lengths Along South Edge of Deck	Void Lengths Along North Edge of Deck
1	2	23'-9⅝"	24'-0⅞"	W. End 19'-5⅝" E. End 20'-3⅝"	W. End 19'-8⅞" E. End 20'-6⅞"
2	3	3 Spaces @ 18'-8"	18'-6" End 18'-8" Center 18'-6" End	15'-2" W. End 16'-8" Center 14'-4" E. End	15'-0" W. End 16'-8" Center 14'-2" E. End
3	2	23'-5⅛"	23'-3⅞"	2 Spaces @ 19'-1⅛"	2 Spaces @ 18'-11⅞"

DESIGNED	PJL
CHECKED	LLV
DRAWN	MGM
CHECKED	PJL

NOTES

1.) Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be ½" and the nominal cross-sectional area shall be 0.153 sq. in.

2.) The 1" ϕ rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.

3.) Reinforcement bars shall conform to ASTM A 706, Grade 60. (See Special Provisions).

4.) Two ⅛" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.

5.) A minimum 2½" ϕ lifting pin shall be used to engage the lifting loops during handling.

6.) Corrosion Inhibitor, per Article 1020.05(b)(12) and 1021.06 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.

7.) Compressive strength of prestressed concrete, f'c, shall be 6000 psi.

8.) Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	12	#5	32'-8"	
Precast Prestressed Concrete Deck Beams (27" Depth)			Sq. Ft.	4,966
Concrete Superstructure			Cu. Yd.	3.9
Reinforcement Bars, Epoxy Coated			Pound	410

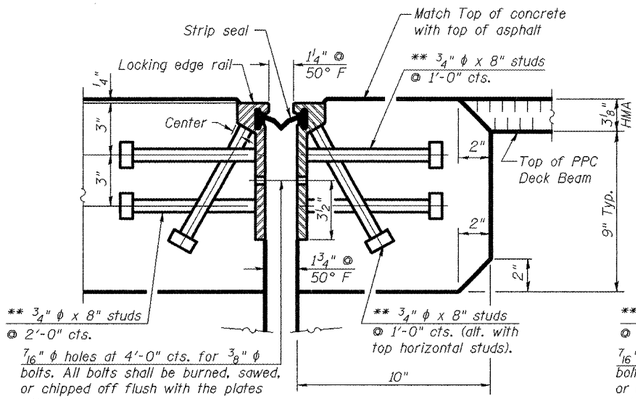
27" X 36" PPC DECK BEAM DETAILS SPOON RIVER ROAD STATION 2+25.00

AECOM
111 NE Jefferson Ave.
Peoria, Illinois 61602
Ph. 309.676.8464
Fax. 309.676.5445
IL Design Firm Reg.
No. 184-001518
www.aecom.com

HWY	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CH R15	08-00092-01-BR	PEORIA	16	10
STRUCTURE NO. 072-3101				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT BROS-143(050)		

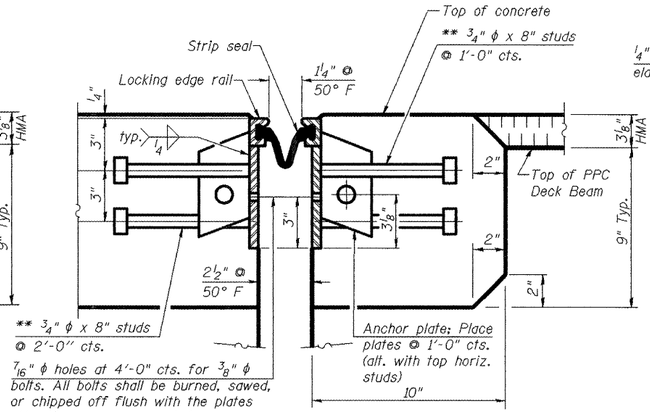
4/10/2009 10:42:33 AM K:\PROJECTS\20080364Z\DGN\072-3101.dgn

** Granular or solid flux filled headed studs conforming to Article 1006.32 of the Standard Specifications, automatically end welded.



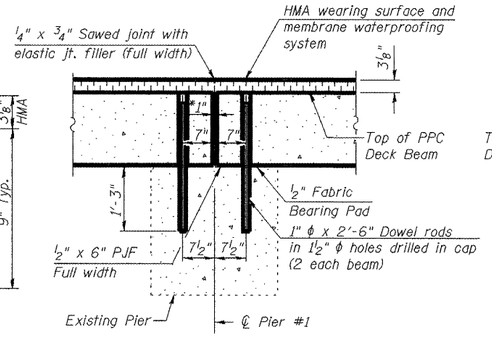
7/16" ϕ holes at 4'-0" cts. for ⅜" ϕ bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.

SECTION THRU ROLLED RAIL JOINT



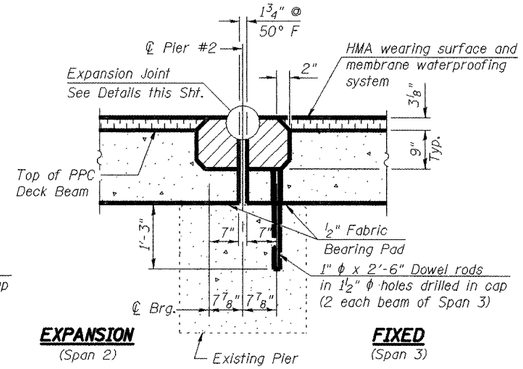
7/16" ϕ holes at 4'-0" cts. for ⅜" ϕ bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.

SECTION THRU WELDED RAIL JOINT



SECTION THRU FIXED PIER #1

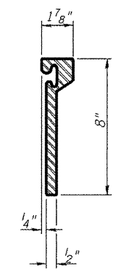
*1" Jt. shall be filled with non-shrink grout. 1" dimension may vary to accommodate tolerance in beam lengths.

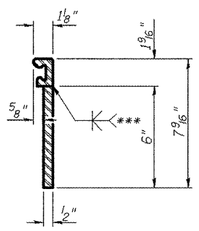


SECTION THRU EXPANSION / FIXED PIER #2

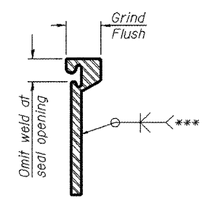
Notes at Both Piers:

1. After beams have been erected, holes shall be drilled into substructure and anchor dowels placed. Dowel holes shall be filled with non-shrink grout to top of beam and allowed to cure min. 24 hrs. prior to grouting the shear keys.
2. All horizontal dimensions are at right angles to beam ends.
3. Hatched area to be poured after beams are in place. Paid for as "Concrete Superstructure". See Sht. 10 of 16.
4. See Sht. 10 of 16 for Bearing Pad Details.



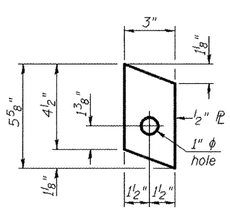


WELDED RAIL

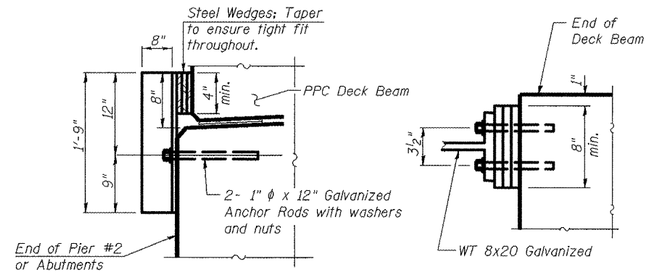


***Back gouge not required if complete joint penetration is verified by mock-up.

ROLLED EXTRUDED RAIL



ANCHOR ℘
(for welded rail)



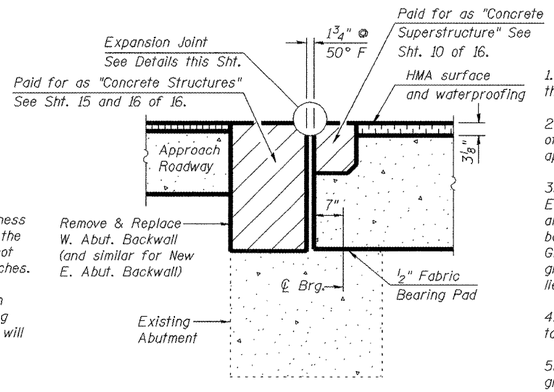
PERMANENT RETAINER
At Expansion Ends of Deck Beams (6 Required)

1. Permanent side retainers shall be provided outside the facia beams at the expansion ends of all spans.
2. All retainers and anchor bolts are included in the cost of Precast Prestressed Concrete Deck Beams of the applicable depth.
3. Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36 ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.
4. Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.
5. Retainers shall be shimmed tight until the shear keys are grouted and cured. The shims shall then be removed from the permanent retainers and the retainers left in place.
6. Permanent steel components shall be hot dip galvanized according to AASHTO M111 and ASTM A385.

LOCKING EDGE RAIL SPLICE

The inside of the locking edge rail groove shall be free of weld residue.

LOCKING EDGE RAILS



SECTION THRU ABUTMENTS

Notes:
1. All horizontal dimensions are at right angles to beam ends.
2. Hatched area to be poured after beams are in place.
3. See Sht. 10 of 16 for Bearing Pad Details.

NOTES

1. The strip seal shall be made continuous and shall have a minimum thickness of ¼". The configuration of the strip seal shall match the configuration of the Locking Edge Rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated movement of 4 inches.
2. The height and thickness of the Locking Edge Rails shown are minimum dimensions. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed. Locking Edge Rails may be spliced at slope discontinuities and stage construction joints.
3. The manufacturer's recommended installation methods shall be followed.
4. The joint opening and deck dimensions detailed on the superstructure are based on a rolled rail expansion joint. If the Contractor elects to use the welded rail expansion joint, the opening and deck dimensions shall be modified according to the dimensions detailed on this sheet. Required modifications shall be made at no additional cost to the State.
5. All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	99

PREFORMED JOINT STRIP SEAL
SPOON RIVER ROAD
STATION 2+25.00

DESIGNED	PJL
CHECKED	LLV
DRAWN	MGM
CHECKED	PJL

AECOM
111 NE Jefferson Ave.
Peoria, Illinois 61602
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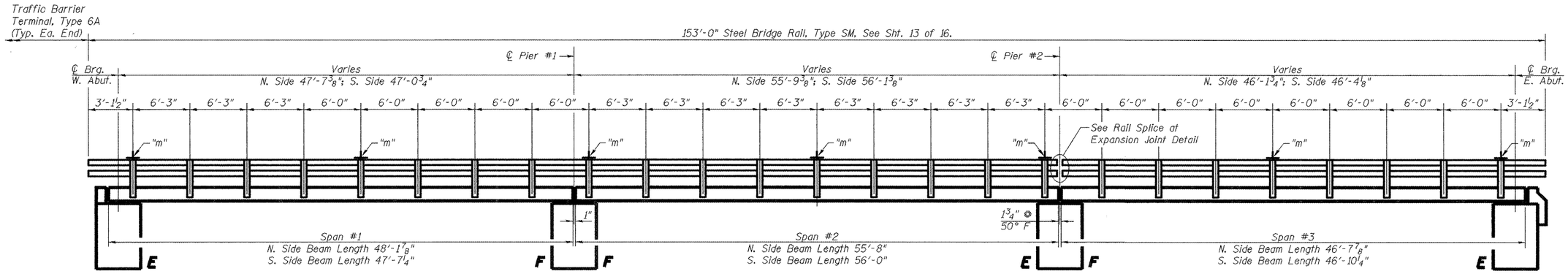
Fax: 309.676.5445
IL Design Firm Reg. No. 184-001518
www.aecom.com

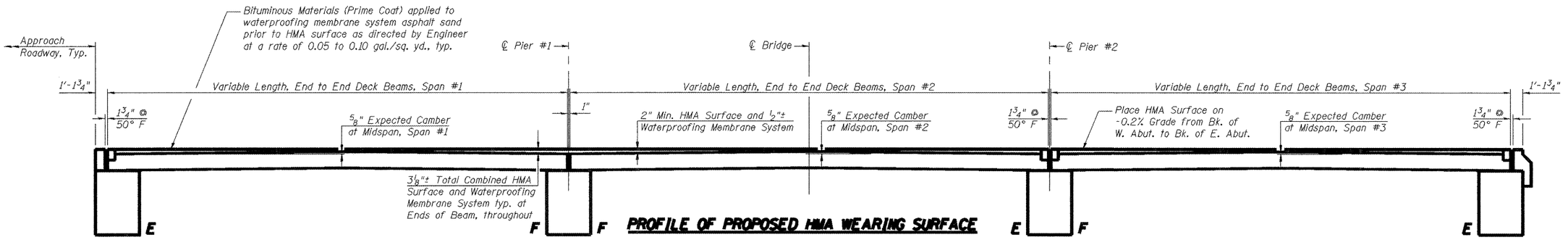
HWY	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CH R15	08-00092-01-BR	PEORIA	16	11
STRUCTURE NO. 072-3101				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT BROS-143(050)		



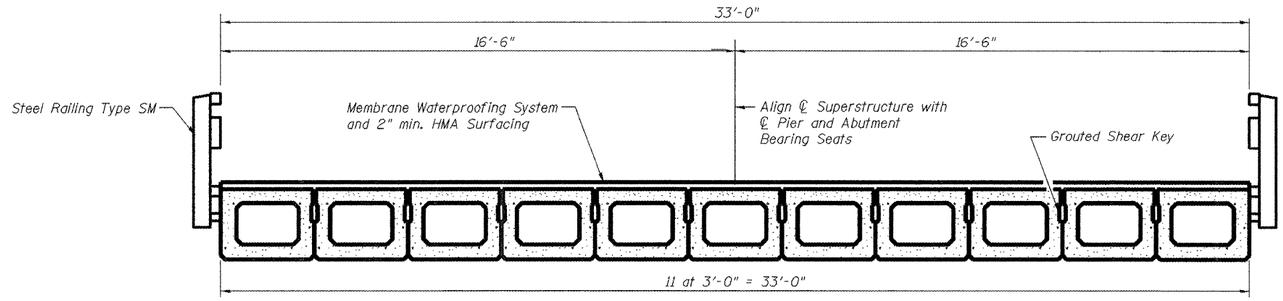
RAIL POST SPACING DETAIL

Typ. Both Sides

"m" indicates Monodirectional Prismatic Barrier Reflectors.
7 Each rail (one every 4th post).



PROFILE OF PROPOSED HMA WEARING SURFACE



TYPICAL CROSS SECTION

BILL OF MATERIAL

Item	Unit	Total
Bituminous Materials (Prime Coat)	Gallon	54
Hot-Mix Asphalt Surface Course, Mix "C", N30	Ton	73.3
Monodirectional Prismatic Barrier Reflector	Each	14
Waterproofing Membrane System	Sq. Yd.	539.6
Portland Cement Mortar Fairing Course	Foot	1.482

DESIGNED	PJL
CHECKED	LLV
DRAWN	MGM
CHECKED	PJL

SUPERSTRUCTURE DETAILS
SPOON RIVER ROAD
STATION 2+25.00

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111 NE Jefferson Ave.
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Fax: 309.676.5445
IL Design Firm Reg. No. 184-001518
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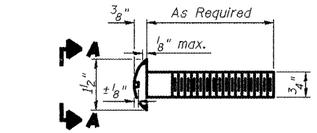
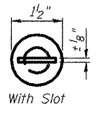
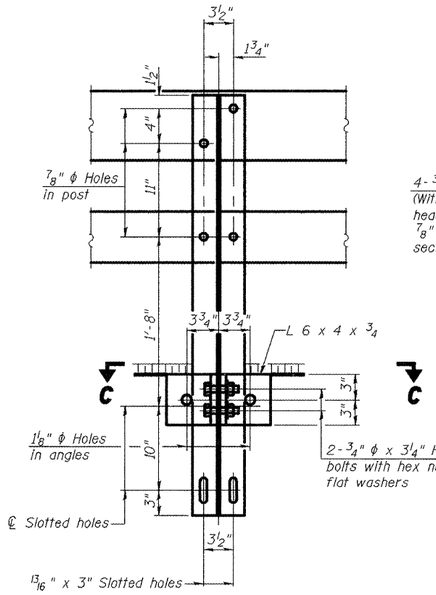
HWY	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CH R15	08-00092-01-BR	PEORIA	16	12
STRUCTURE NO. 072-3101				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT BROS-143(050)		



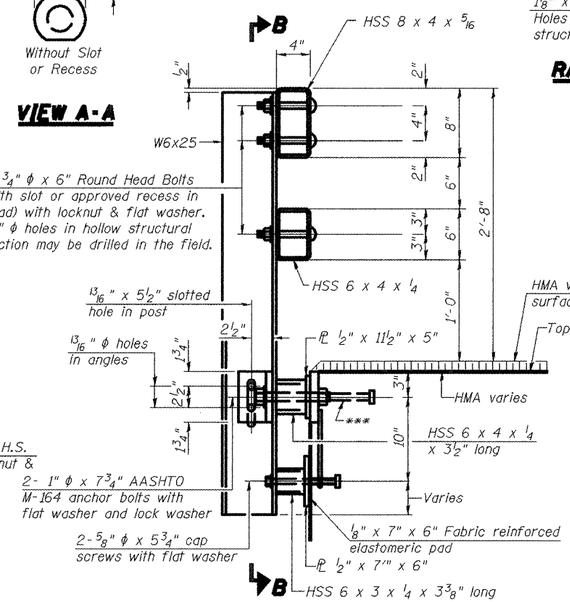
DETAIL OF 3/4" ϕ ROUND HEAD BOLT



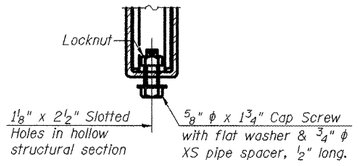
VIEW A-A



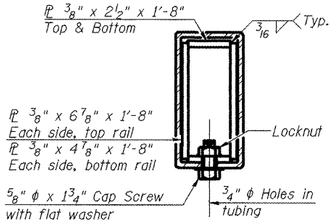
SECTION B-B



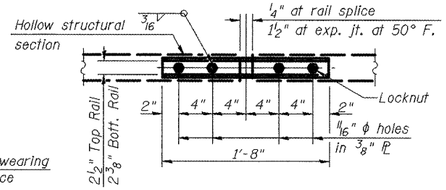
SECTION AT RAIL POST



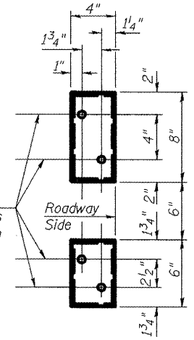
RAIL SPLICE CONNECTION AT EXPANSION JT.



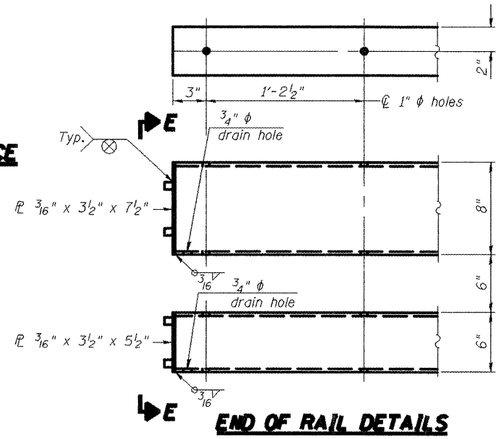
SECTION AT RAIL SPLICE



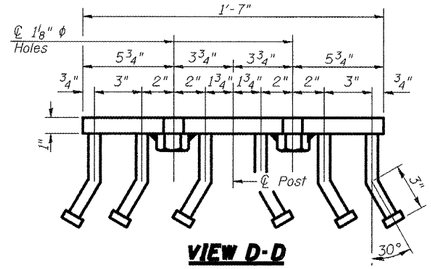
PLAN-BOTTOM, SPLICE PL TYPICAL



VIEW E-E



END OF RAIL DETAILS



VIEW D-D

℄ - 5/8" reduced base welded studs. Provide 4- 5/8" washers and self-locking nuts or nuts and jam nuts for guardrail connection shown on Std. 631032

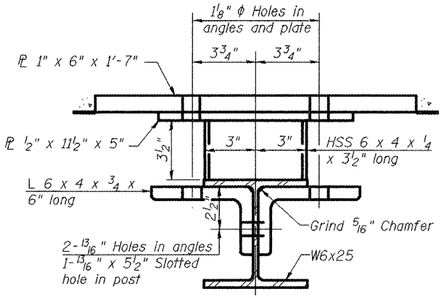
Notes:
1. All field drilled holes shall be coated with an approved zinc rich paint before erection.

2. For multi-span bridges, sufficient 1/4" x 6" x 1'-2" galvanized steel shims shall be provided to align rail between adjacent spans. Cost included with Steel Railing, Type SM.

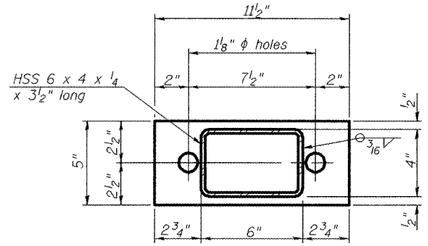
3. All steel rail members shall be galvanized according to Article 509.05 of the Standard Specifications.

**Whenever the lower insert assemblies interfere with strand locations, the #3 bars shall be cut and adjusted in order to allow raising or lowering of the lower inserts. Maximum adjustment not to exceed 1/2".

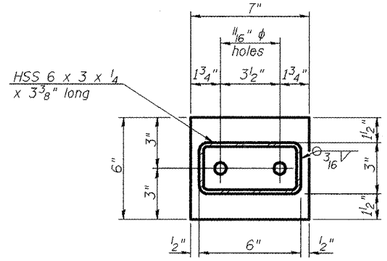
***The studs of the anchor devices shall be placed below the top reinforcement bars and the outermost longitudinal reinforcement bar shall be placed directly above the studs of the rail post anchor device.



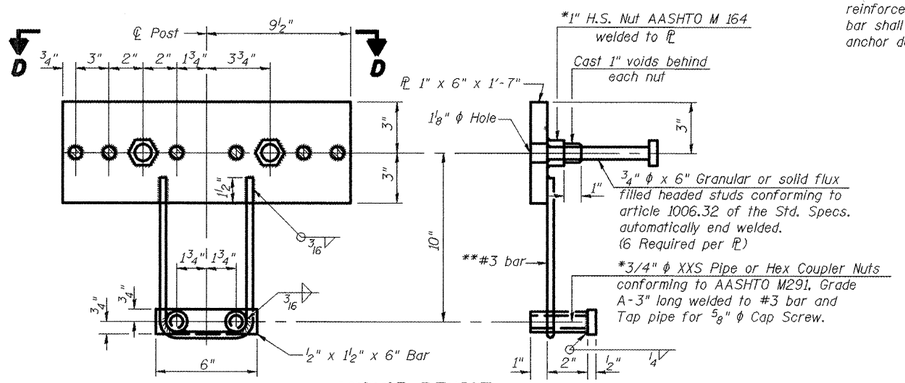
SECTION C-C



PL 1/2" x 11 1/2" x 5"



PL 1/2" x 7" x 6"



ANCHOR DEVICE

*Threaded areas shall be plugged or blocked off during casting of beam. Galvanized after fabrication.

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type SM	Foot	306

STEEL RAILING, TYPE SM WITH HOT MIX ASPHALT WEARING SURFACE SPOON RIVER ROAD STATION 2+25.00

DESIGNED	PJL
CHECKED	LLV
DRAWN	MGM
CHECKED	PJL

(6'-3" Maximum Post Spacing) (1 1/4" minimum to 3 1/8" maximum HMA thickness)

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111 NE Jefferson Ave.
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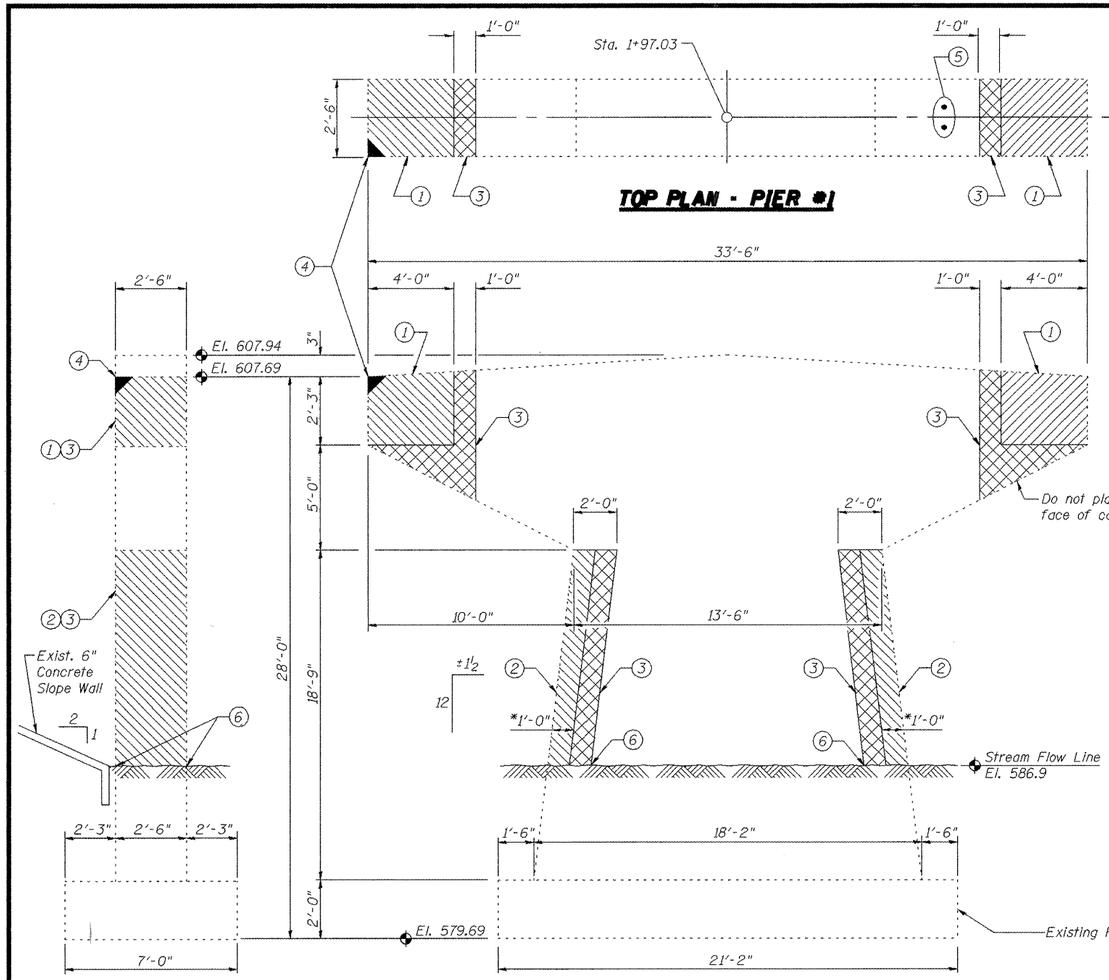
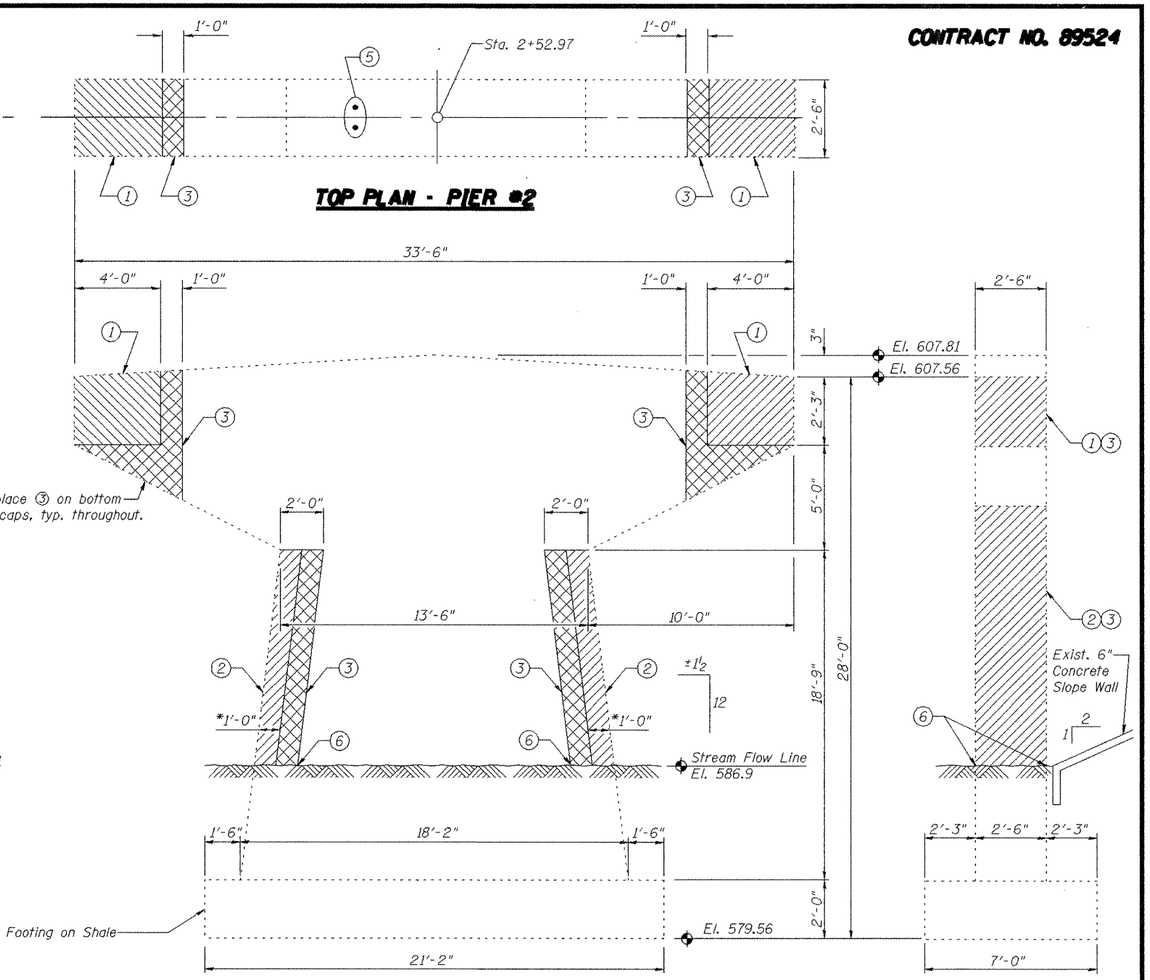
HWY	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CH R15	08-00092-01-BR	PEORIA	16	13
STRUCTURE NO. 072-3101				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT BROS-143(050)		

CONTRACT NO. 89524





END VIEW - PIER #1
(Looking North)

WEST ELEVATION - PIER #1
(Looking East)

WEST ELEVATION - PIER #2
(Looking East)

END VIEW - PIER #2
(Looking North)

PIER REPAIR ITEMS SUMMARY

Key	Item	Unit	Pier #1 N. End	Pier #1 S. End	Pier #2 N. End	Pier #2 S. End	Total
①	Concrete Repair: Top, 2 Sides & Ends of Pier Caps	Sq. Ft.	34	34	34	34	
②	* Concrete Repair: 2 Sides & Ends of Pier Shafts	Sq. Ft.	24	28	10	40	
Total	* Structural Repair of Concrete depth greater than 5"	Sq. Ft.	29	31	22	37	119**
Total	* Structural Repair of Concrete depth equal to or less than 5"	Sq. Ft.	29	31	22	37	119**
③	Single Ply Fiber Reinforced Protection applied to cap and shaft ends (min. to surfaces ① and ② and 1 ft. beyond, typ.)	Sq. Ft.	284		285		569
③	Acrylic Coating applied to cap and shaft ends (min. to surfaces ① and ② and 1 ft. beyond, typ.)	Sq. Yd.	31		32		63
④	Repair Broken Concrete in NW Corner of Pier 1 Cap: Quantity included in ① above						
⑤	Remove existing deck beam dowels, clean & fill existing holes with non-shrink grout, and drill new holes for new deck beam dowels. Work included in Removal of Existing Superstructures.						
⑥	Underwater Structure Excavation Protection for Pier & Slope Wall Repairs	Each	Location 1: 1		Location 2: 1		2

Notes:

1. Reconstruct all exposed edges to match existing $\frac{3}{4}$" chamfers.

2. Elevations are approximate based on 1976 plans converted to current USGS Benchmark datum.

* 1'-0" (varies 0 to 18"±) actual limits and depth of concrete repair to be determined in field.

** For totals, estimate concrete repairs split thus: 50% greater than 5" depth and 50% equal to or less than 5" depth.

PIER REPAIR DETAILS
SPOON RIVER ROAD
STATION 2+25.00

DESIGNED	PJL
CHECKED	LLV
DRAWN	MGM
CHECKED	PJL

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111 NE Jefferson Ave.
Peoria, Illinois 61602
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HWY	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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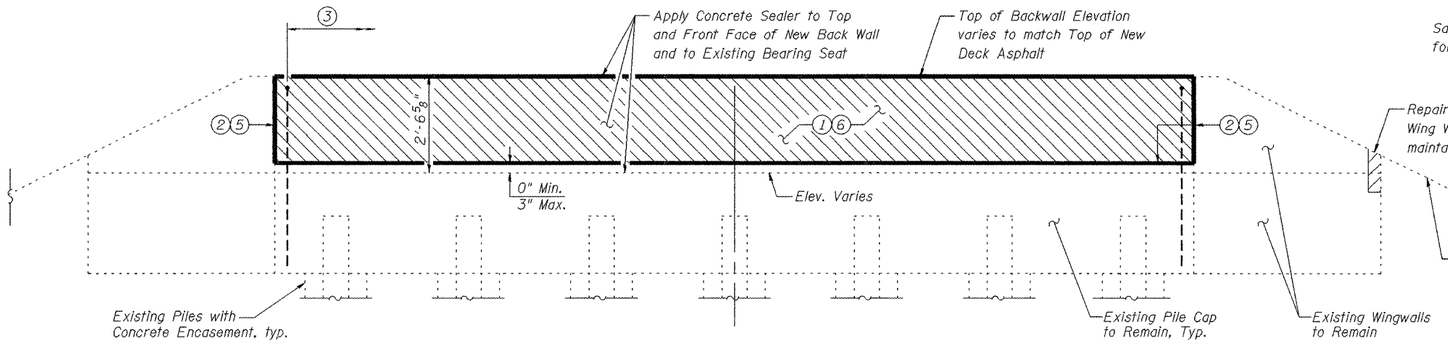
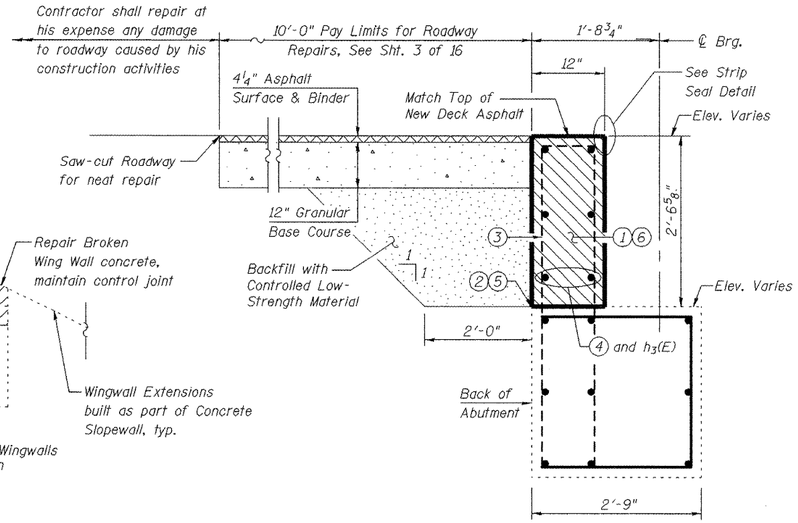
STRUCTURE NO. 072-3101				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT BROS-143(050)		

CONTRACT NO. 89524

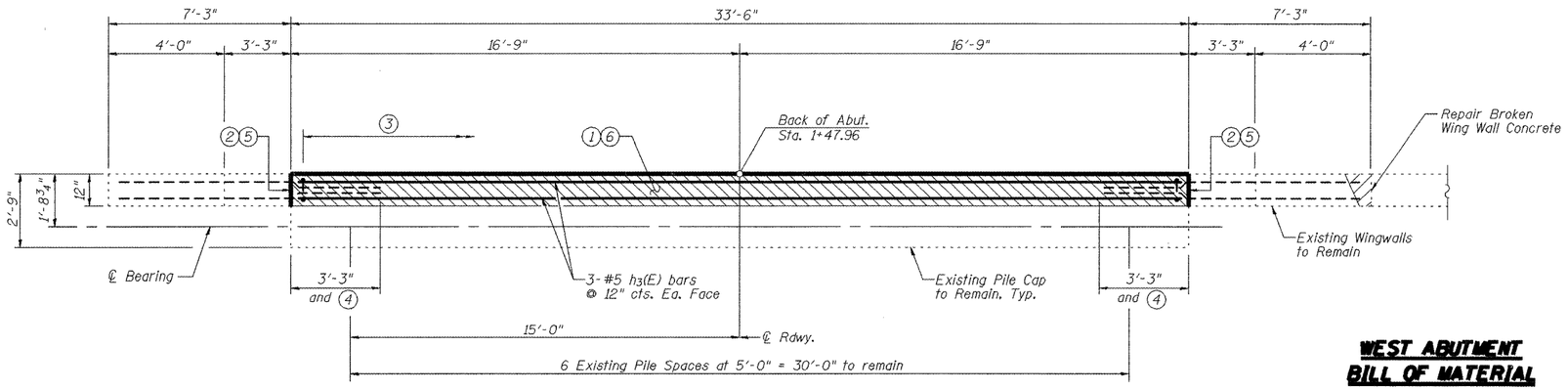


WEST ABUTMENT ELEVATION

Hatched Area to be poured after beams are in place.



SECTION THRU WEST ABUTMENT



WEST ABUTMENT PLAN

WEST ABUTMENT MODIFICATIONS

(1) Remove existing back wall in order to replace deck joint seal. Concrete removal shall be in accordance with Article 501.05 of the Standard Specifications.

(2) ¾" saw cut for concrete removal.

(3) Incorporate existing #4 at 12" cts. vertical bars into new concrete.

(4) Incorporate 6-#5 horizontal bars from wing walls into new concrete. Lap 3'-0" min. with new horizontal #5 h3(E) bars.

(5) Bonded construction joint new concrete to old.

(6) New Concrete Structures back wall cast after new PPC deck beams are secured in place and shear keys are grouted and cured. See Strip Seal Joint Details for additional top of wall details.

WEST ABUTMENT BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h3(E)	6	#5	33'-5"	———
Concrete Removal			Cu. Yd.	2.8
Concrete Structures			Cu. Yd.	3.2
Reinforcement Bars, Epoxy Coated			Pound	210
Structure Excavation			Cu. Yd.	7
Controlled Low-Strength Material			Cu. Yd.	5
Concrete Sealer			Sq. Ft.	178
Structural Repair of Concrete, Depth > 5"			Sq. Ft.	2

DESIGNED	PJL
CHECKED	LLV
DRAWN	MGM
CHECKED	PJL

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Peoria, Illinois 61602
Ph: 309.676.8464
Fax: 309.676.5445
IL Design Firm Reg. No. 184-001518
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HWY	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CH R15	08-00092-01-BR	PEORIA	16	15
STRUCTURE NO. 072-3101				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT BROS-143(050)		

WEST ABUTMENT DETAILS
SPOON RIVER ROAD
STATION 2+25.00

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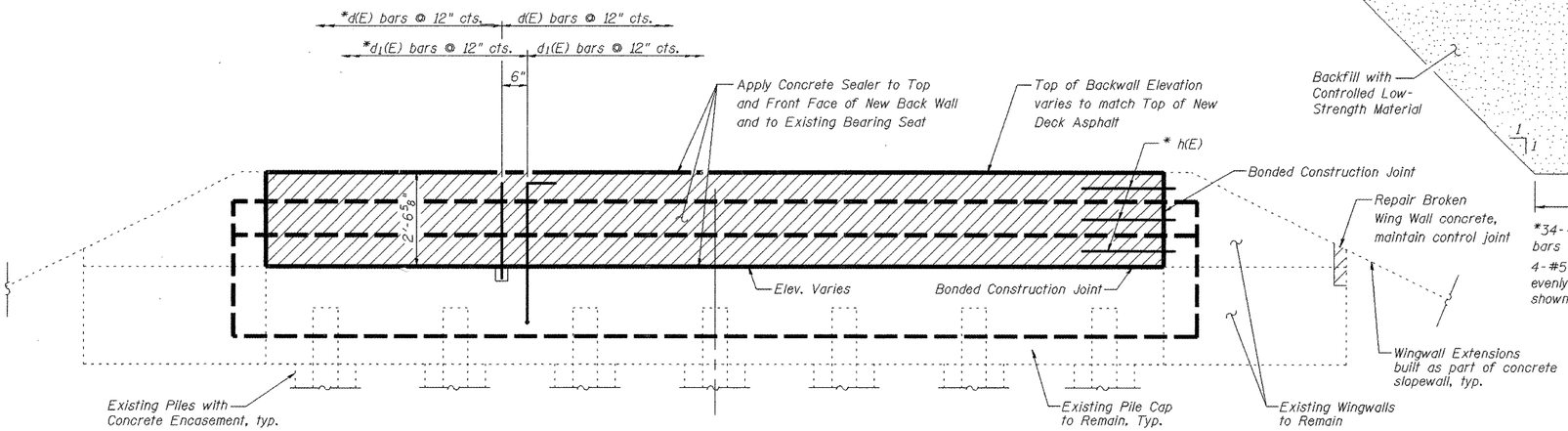
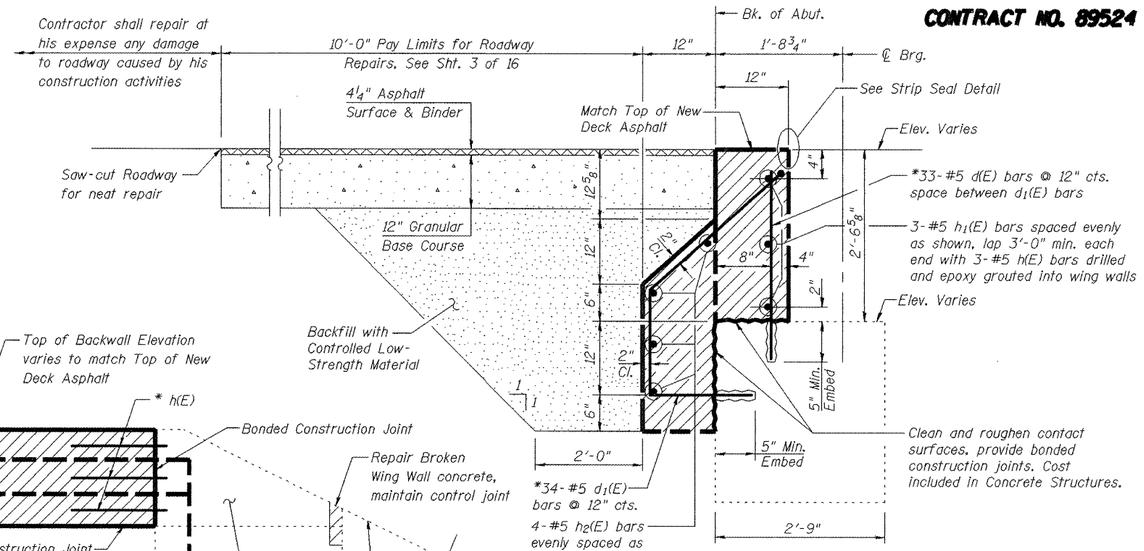
CONTRACT NO. 89524



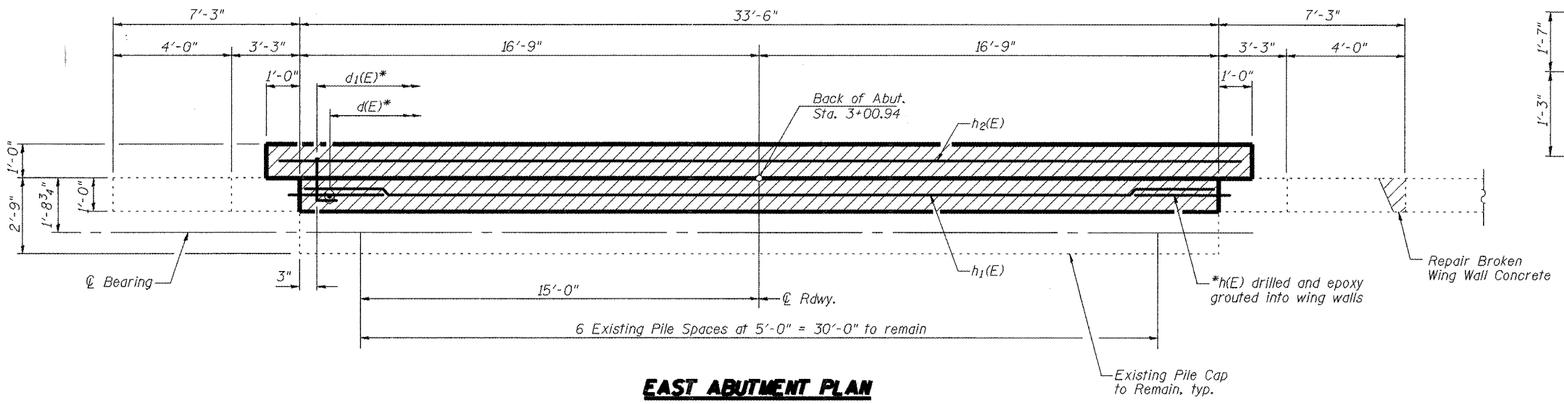
EAST ABUTMENT ELEVATION

Hatched Area to be poured after beams are in place.

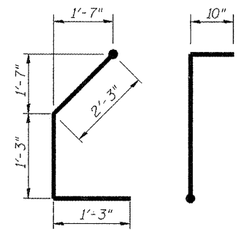


EAST ABUTMENT BACKWALL CONSTRUCTION

Existing East Abutment was built without a backwall. Contractor shall construct a backwall after the new deck beams are erected, transverse ties are assembled, and beams are doweled and grouted to substructure.



EAST ABUTMENT PLAN



d1(E) BAR

EAST ABUTMENT BILL OF MATERIAL

	Bar	No.	Size	Length	Shape
*	d(E)	33	#5	2'-9"	
*	d1(E)	34	#5	5'-7"	
*	h(E)	6	#5	3'-6"	
	h1(E)	3	#5	33'-5"	
	h2(E)	4	#5	35'-2"	
	Reinforcement Bars, Epoxy Coated		Pound	570	
	Structure Excavation		Cu. Yd.	17	
	Concrete Structures		Cu. Yd.	6.5	
	Controlled Low-Strength Material		Cu. Yd.	15	
	Concrete Sealer		Sq. Ft.	178	
	Structural Repair of Concrete, Depth > 5"		Sq. Ft.	2	

*Drill and epoxy grout d(E) and d1(E) bars into concrete cap and h(E) bars into concrete wing walls in accordance with Section 584 of the Standard Specifications. Space to miss existing rebar. 5" minimum embedment into existing concrete.

EAST ABUTMENT DETAILS
SPOON RIVER ROAD
STATION 2+25.00

DESIGNED	PJL
CHECKED	LLV
DRAWN	MGM
CHECKED	PJL

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